

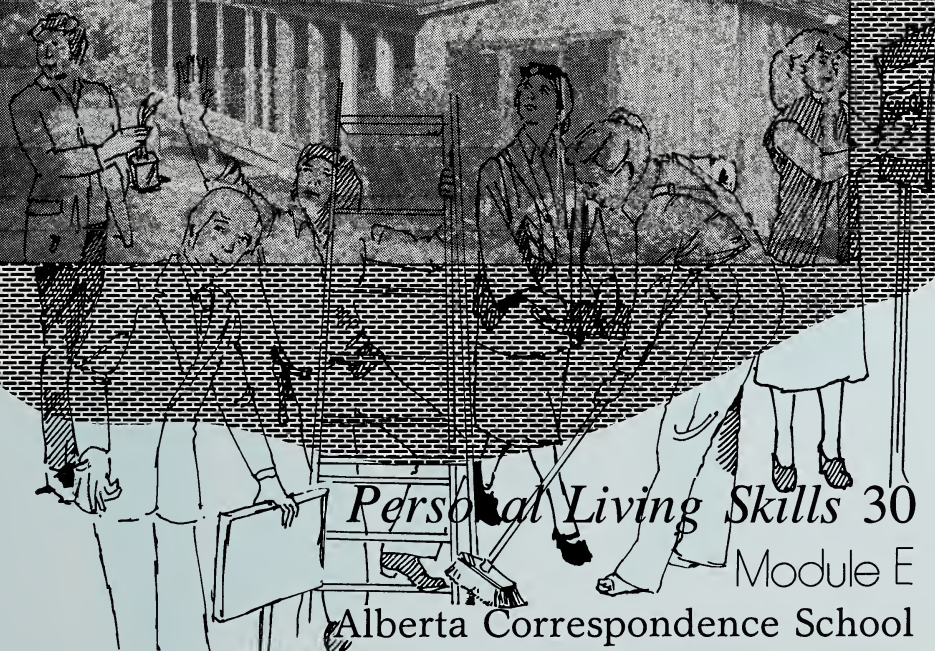
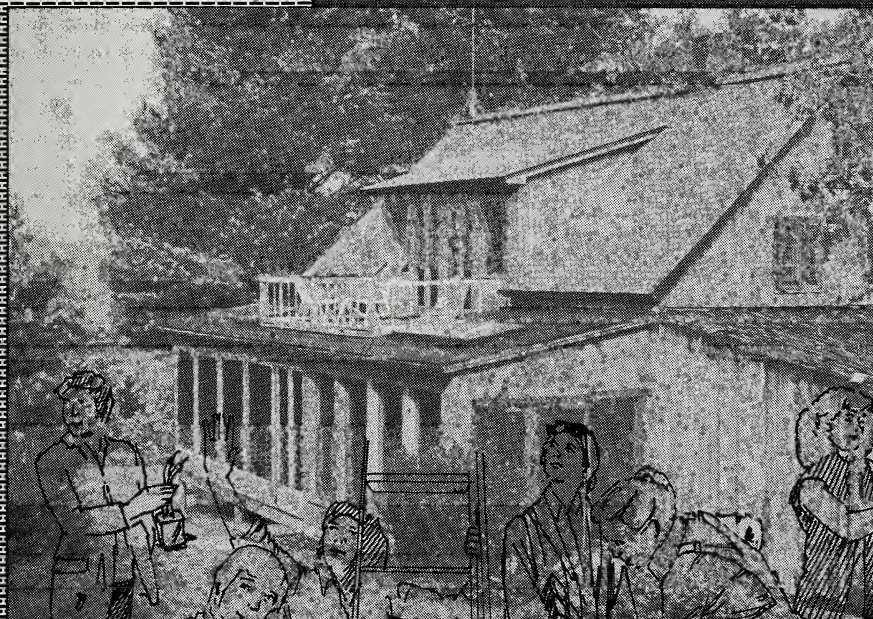
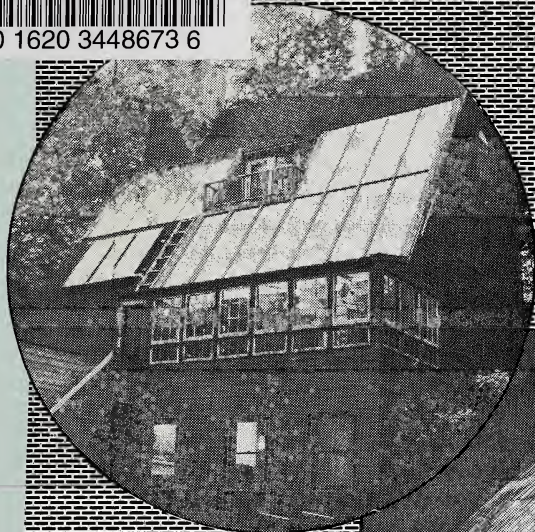
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A STUDY OF HOUSING



Personal Living Skills 30

Module E

Alberta Correspondence School

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A STUDY OF HOUSING



**Distance
Learning**

Alberta
EDUCATION

Personal Living Skills 30
Student Module
Module E
A Study of Housing
Alberta Correspondence School
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FACTORS INFLUENCING HOUSING FORM AND USE

The final module in Personal Living Skills 30 deals with a study of housing. In this module we will be examining the factors that influence housing form and use, the planning of living spaces, future home designs and careers in home design.

Lifestyle

One's lifestyle (living pattern or way of life) has an influence on the form of housing one chooses and the way one uses one's home. One's lifestyle is influenced by one's needs, values and life cycle. It is a reflection of one's goals, personality and experiences. People living in a beautiful house with expensive furnishings (a very formal dining room) share a lifestyle that includes hosting formal dinner parties.

Individualistic Lifestyles

An individualistic lifestyle is one where you do your own thing. You do what you want to do when you want to do it. You are not bothered by what others think. If you want to live in a blue, yellow and green house, you paint your house these colors. If you prefer travelling, you will find a way to do it, even if it means selling your home and leaving your career.

Supportive Lifestyle

If you enjoy helping others, you may develop a supportive lifestyle. For example, you may help family members or you may choose to work away from home to help others. Some people are both a helper at home and a wage earner outside the home. A person having a supportive lifestyle should choose housing to allow him to support others regardless of the type of support, be it psychological, financial or physical. For instance, it would be helpful to have a large outdoor area with plenty of room for large groups of guests to circulate freely as well as room for children to play. Other supportive activities include building a playhouse for children to enjoy, installing carpet to reduce the noise level in a home, preparing family meals and caring for family members.

Influential Lifestyle

People preferring an influential lifestyle are highly motivated and have strong desires to attain their goals. Leadership becomes one of their roles. They use their resources like skills, talents, money or energy to support projects that may be of religious, civic or political origin.

Their housing choices should allow these activities to be carried out in comfort. For example, a home office would be in order for people having influential lifestyles. Also having a room with adequate seating for meetings of work groups and committees would be appropriate.

Basic Lifestyle

A basic lifestyle is living simply without many modern conveniences. Feeling concerned about the effects of pollution and the rapid depletion of natural resources has led people to try this way of life.

Paolo Soleri, an architect and philosopher, began designing new buildings and ways of using resources. In the 1970's, he began working in a remote area in Arizona which he refers to as "Arcosanti" derived from the word "architecture" and the Italian word "cosant" meaning "before things." At Arcosanti, the building materials include the native rock, sand and stone. All buildings are close together to conserve land. They are designed to use the sun for warmth and light. Water is recycled and waste products are converted into energy.

Finding Out About Your Lifestyle

Choosing a lifestyle is similar to choosing the clothes you wear. You do not relax or feel good about yourself when you wear clothing you do not feel comfortable in. The uneasy feeling from wearing clothes that are very different from your usual attire results because your chosen clothing is not an expression of the real "you." Likewise your choice of a lifestyle should meet your needs and express yourself.

The first step in choosing a lifestyle is to start by asking yourself the following questions:

1. Do I keep busy with activities?
2. Do I spend much time at my home?
3. Do I entertain a lot of people?
4. Do I like to pursue a special talent?
5. Do I like to study, read, listen to music or watch television?
6. Do I like sports and have ample storage space for my sports equipment?

To find out about your lifestyle, you can make two charts — one identifying your activities and the needs required to carry out these activities (furniture, space and equipment). See Figure 1. A second list describing your personal likes and dislikes in a home will be helpful in finding out about your lifestyle. See Figure 2.

Figure 1	
Activities	Needs (Furniture, space, equipment)
Cooking and Eating	table and chairs, kitchen space (counter, cupboards), cooking equipment - pots, pans, bowls, mixing utensils, recipe books, variety of ingredients
Sleeping	comfortable bed, bedding, comforters, storage
Studying	desk, chair, adequate lighting
Reading	comfortable chair, adequate lighting
Entertaining	space, furniture, equipment like glasses, plates etc.
Crafts	space necessary for storing craft equipment (for example, loom, potter's wheel, kiln, etc.) and space to carry out the craft project
Sports	space necessary for storing sports equipment, for example, skis, hockey equipment, snowshoes, etc.

Figure 2	
Likes	Dislikes
I like action.	I dislike cleaning.
I like neatness.	I dislike smooth textures.
I like quietness.	I dislike greens, blues and black.
I like a feeling of spaciousness.	
I like being alone.	
I like plants.	
I like sports.	
I like reds and yellows.	
I like rough textures.	
I like freedom of movement.	

There are some trends in lifestyles that affect people's choice of homes:

Mobility – Years ago, people stayed in the same area for their entire lives. Today, however, people are more mobile. After completion of high school, people move to larger cities to attend university, college or technical schools. A new job or a job transfer can cause people to move. Also, marriage can mean a move to a new location.

Mobility affects furniture selection. Bulky and heavy furniture is difficult to move and sometimes there are problems with getting it to fit through doorways.

Adaptability of furniture also comes into play. Can a piece of furniture be used in a dining room, living room, bedroom or family room?

Reduction in Housekeeping Time—With more homemakers working outside the home, there is less time available for homemaking chores. Also, there are more homemakers spending time on volunteer work and many families are single parent families. With these circumstances, homemakers are giving priority to ease of maintenance when choosing floor coverings, upholstery and furniture.

Smaller Living Space—People are becoming more interested in smaller homes because of the high cost of living accommodations, the high cost of property taxes and the high cost of energy to heat homes.

This results in smaller homes accommodating smaller furniture pieces, fewer furniture pieces being needed, and versatile furniture that serves more than one purpose.

Fewer Storage Areas—To reduce house costs, builders are eliminating or reducing in size the closets, cupboards, pantries and shelves. Some spaces are serving several functions like a living-dining-family room or a study-den-guest bedroom. Using dual-purpose furniture like a sofa-bed or a bed with drawers beneath helps in achieving minimum crowding, easy maintenance and maximum comfort.

Changing Patterns of Entertaining—The trend of entertaining has changed. Today people are entertaining more casually and are inviting smaller groups of people. Because more entertaining is being done outside the home, less tableware and furniture are required. Also, there is less need to have a formal dining room.

Self-Expression

A home is an expression of the interests, personalities, preferences and activities of those living in it. It is an expression resulting from a collection and adaptation of ideas, of possessions and of interests picked up over the years.

There is always the problem of too many “look alike” homes, particularly in cities where house after house is the same. Individuality or character is the quality which differentiates one home from another and expresses the personality of the people in it. Individuality can occur almost automatically if a home is inspired, planned, finished and decorated from the families’ interests and preferences. Achieving individuality can be a real challenge, however, if you let your friends and neighbors significantly affect your thinking, designing and selecting.

Establishing an overall interior and exterior character for the home that meets every family member’s expectations is difficult. There may be a need for personal spaces in which family members can be themselves (such as a room for teenagers). Remember that creating a home to follow current trends or as a copy of another home will not express the nature of the household, its members, and their way of life. Character varies from formal to informal, relaxing to activating, unusual to commonplace, etc. Think about the character you want and how it will be achieved.

Beauty

A home should be attractive to those who live in it. Beauty is viewed differently by individuals. What is a beautiful home to one family may not be to another.

Beauty is a quality which pleases the senses and lifts the spirits. To achieve beauty, the application of the principles of design like balance, proportion and scale, and the elements of design (color, texture and pattern) must be skillfully combined. Lesson One of Module D dealt with these principles in more depth as applied to home design.

Good taste is inherent with the majority of people so without even fully realizing the principles and elements of design, a degree of beauty can be achieved in every home.

Family Needs

There are very basic needs that we require in a comfortable home (like a place to sleep, eat, cook and relax). This basic list also includes bedrooms, bathrooms, storage areas, entertaining spaces, working areas, hobby spaces and could go on and on depending on the family requirements.

The roots of a successful home lie in the accommodation of the occupants' needs, wishes, tastes and lifestyles. The expression of these aspects should appear in the plan, and the overall design and the decoration of the home. Assess the needs of the individual family members. Sometimes very special needs may be required for handicapped or elderly persons.

The Family Life Cycle

The family life cycle is a valuable aid in understanding and meeting the problems of family life, including the deciding of housing choices. Although each family is different, many go through similar life history stages. Two relatively young people start the family which grows into a larger group and then returns to a group of two older people.

Considering the family life cycle allows families to look ahead at housing needs and wants that may occur during each stage. It also helps the family see the amount of resources that are likely to be available.

What exactly is the family life cycle? Many families have a life cycle that begins with marriage and ends with death, divorce or separation. The life cycle can be divided into six stages: new couples, beginning family stage, expanding stage, the launching stage, the later years and retirement. In each of these six stages, a family has different housing requirements in terms of both arrangement and space. Each stage has typical housing and management problems.

As one grows up, one needs more sleeping space. A baby sleeps in a crib. Later he may move to a bunk bed or a twin-size bed. Bunk beds provide the same amount of sleeping space as twin beds without taking up as much floor space. Finally the child moves to a full-size bed.

One also needs space for one's activities and space for storage. These needs for space change throughout the family life cycle.

Let us now investigate each stage of the family life cycle individually in relation to housing.

New Couples

In this first stage the couple are starting out life together. The cost of furnishing a first home is very high; therefore, a young couple's first home is usually an apartment. Also, they do not need very much space.

The couple have to make long-range decisions about where to live, family planning, how money is to be earned and spent, and who will do which housekeeping jobs. This stage is the time when housing expenses should be kept low in order to buy furniture, plan for an expanding family and possibly save toward home ownership. The first years of the family life cycle are rich in possibilities for enjoying life together, sharing defeats and successes and learning what is important in home management. With so much to learn and work out, it is usually best for newlyweds to avoid the added responsibilities of a large house or a large apartment.

The Beginning Family

This stage begins when the first child is born. The apartment that the young couple lives in becomes too small and crowded. Housing becomes child-focused and generally remains so for many years to come. Although the housing needs of families with an infant are not too complicated, his arrival means moving to larger living quarters. It may be a two-bedroom apartment in a building similar to the first home or a small rented house. The parents must make room for additional clothing, equipment, furnishings and activities. A baby needs a quiet place with a lot of fresh air to sleep. There should be a storage place for diapers, and for feeding and bathing equipment.

When the baby begins to crawl and walk, he needs play equipment and uncluttered space in which to play. He also needs to play outside with friends so he can develop socially. Parents in this stage usually run into the problem of renting adequate and comfortable housing near other young couples with children. Some couples in the beginning family stage start to consider the possibility of renting or buying a home if they have the sufficient down payment. Couples who already own their home consider "do-it-yourself" projects for convenience in care of the baby.

For the parents, there are insufficient hours to do the cleaning, do the shopping, do the meal preparation, become involved in recreational activities and care for the new arrival.

Health, safety and comfort rate high on the list of values. Friendship and personal interests should not be overlooked; this can easily be done during this period.

The Expanding Family

This stage is marked by the arrival of the second child. The family's income has probably increased but so have the expenses. If the family's savings will not provide for a down payment on a home, the family usually moves into a comfortable townhouse or condominium.

The children's health becomes important, so fresh air and play space are essential. Safety takes on new forms with young parents becoming aware of the conditions of the outside steps, sidewalks, windows, wiring and other home hazards.

There are demands for privacy by each member of the family. The children argue about possessions and the use of the house for play. The children need separate sleeping areas and each child needs a quiet place to study and do homework. As each child's interests grow and his personality develops, changes have to be made in housing. For example, it may be necessary to provide a quiet place for the family scholar to study and an isolated area for the family musician to practise. All this makes the home life at this stage full, but hectic — one of constant hustle and bustle.

The family may for reasons of need or social status move to a larger home in a better location. Values like beauty and privacy become important to the parents and children.

At the teenage stage, housing needs change again. Teenagers may need space for studying and entertaining friends as well as storage space for sporting equipment, stereo equipment and clothes. They also become more aware of the appearance and atmosphere of their homes.

The Launching Family

This stage is characterized by the first child leaving home to enter the work field, or to attend a university, college or technical school. When this happens, the family house may suddenly be much too large.

The launching family no longer requires the maximum of living space for privacy, personal interests and friendships. When the family members are launched, they may take many of their belongings with them, leaving more space for the rest of the family. This is a period when new interests and friendships become increasingly important to parents.

This stage may be expensive if parents contribute to further education, wedding expenses, or to help their children set up households. Luckily, parents' income may be peaking during this stage.

The Later Years

This stage brings the couple back to a two-person unit. When this occurs, many couples are fairly young (because of the increased life expectancy) and quite active. Because expenses drop, parents usually indulge in new interests both at home and elsewhere. Many couples travel, join clubs, take up hobbies or pursue cultural activities.

Because the home is less busy with the family gone, the couple may choose to return to an apartment, a smaller house, or a townhouse.

Retirement

With retirement, income is usually lower. Health, economy and comfort rate high on the scale of values. Friendship and personal interests can have greater meaning than ever before.

A large house that was necessary for the expanding family may no longer be appropriate for the couple in retirement. For some, retirement brings a reduced activity schedule. Living on a fixed income, with or without pension, their choice of housing may be limited.

Some real estate development and apartments have been designed especially to meet retirement needs.

If a couples' home is paid for and comfortable, the couple may decide to remain in their original neighbourhood.

In summary:

For a house to function well, it must satisfy the needs of the particular family for which it is designed. For example, the spaces planned for group activities should have adequate seating for the family (and friends) and good day/night lighting. If flexibility is needed in rooms like a guest/sewing room, the space should be planned to adapt to the alternate use with a minimum of inconvenience. Comfort and ease in the use of a space is important whether it is the kitchen, the service entry, or the main bathroom. Storage should be conveniently located and easy to use. The functions carried out in a home can be extensive. Carefully consider the many functions that your home must satisfy.

Values

Values are your beliefs in what is good, beautiful or important. Values arise out of your past experiences and are part of your everyday life. They are present in every situation that calls for a decision. Values guide your entire life.

You learn your values from people who are significant to you. For example, your parents, friends and teachers all influence the way you act and what you believe. Your earliest and most basic values come from your family and from close friends whom you admire and respect. Movies, television, radio and other forms of mass media are also becoming very important in shaping the way you want to live.

By taking time to clarify values and establish goals, a family has a better chance to meet its wants and needs. Values grow out of the interests and desires of people and give meaning to life.

The value system of an individual or family represents the collection of ideas, beliefs and conditions of life that are esteemed by the individual or family. These values usually include abstract or nonmaterial conditions, although material possessions may be indirectly involved. For example, prestige may be important to a person; this value might be reflected in a large, expensive house. Some people will decorate their home to keep up with the latest styles and decorating fads. Others may change the appearance of their house very inexpensively by adding new curtains, or an area rug or some wall hangings. Still others may value creativity and express this value in landscaping their own homes.

Since each individual and family holds different values with different ranks of importance, the emphasis placed on housing will vary among people. The importance the family places on housing or home furnishings and equipment exerts some influence on the amount of time and money they are willing to spend selecting these items. Some families will spend as little time and money as possible to fulfill their wants and needs while others will spend a great deal of time and money to make the selections suitable to them.

Surveys show that 70 percent of the population are in favour of home ownership. Almost all families prefer a single family detached house. Row houses or condominiums provide much of the privacy of single family houses, some private outdoor spaces and locations convenient to work and shops. Apartments permit locations near centers of urban activities and, in addition, freedom from maintenance responsibility.

When a family achieves sufficient status to give it a large number of options on where to live, its choice of location tends to be based primarily on what it wants out of life. The family that wants space may start looking at large houses in older neighbourhoods, if that is the only way it can get the space it needs. If the family wants access to theatres, museums or entertainment, it may look for an apartment near the downtown area of a major city.

What do you value? What is important to you? Answers to the following questions will help you decide what your housing values are:

1. How do you want to spend your money? On renting an apartment? On buying or renting a home?
2. How do you like to spend your time? Gardening? Puttering around in the yard? Relaxing?
3. Do you appreciate a well-kept and a well-landscaped yard?

These are not the only clues but they will give you an indication of what your values are. Values influence both goals and standards. Values provide the force that makes people work towards their goals. Values have an important effect in determining the goals set by people and how they choose to work toward these goals. The standards by which we judge our own success are determined by our own values. They represent our own feelings about success but they may not agree with the standards of success that others have. For example, you might feel successful with one hundred and fifty dollars in the bank while your friend may feel successful without any money in the bank.

During the life cycle of a family there are changes in values regarding home ownership. Most new couples rent an apartment. These couples seek privacy, freedom and independence from parents.

The beginning family begins to value:

1. good schools, playgrounds, traffic safety and adequate recreational facilities,
2. privacy and quietness (carefully worked out floor plan and sound-proofing), and
3. putting down roots.

These values influence the kind of housing this family will choose.

The expanding family may prefer a two storey home. This style of home implies status and provides greater room separation and less noise. These families are mainly interested in:

1. newness and additional convenience and greater space for teenagers,
2. quiet areas,
3. attractiveness of the neighborhood,
4. nearness to recreational facilities, community affairs and cultural opportunities, and
5. an attractive home (status symbol).

Goals

Goals are the ends for which a family or individual is willing to work. You will find it easier to plan your spending if you have determined a definite set of goals.

Families plan for several kinds of goals and satisfactions. Some, although important in themselves, help to obtain other ends too (ultimate goals). These are referred to as instrumental goals. Most families want a home of their own. Owning a home may be an ultimate goal in itself or it may be an instrumental goal which contributes to the end goals of privacy, comfort and security.

Families have two kinds of goals: short-term (immediate) and long-term. For a plan to be effective, the short-term and long-term goals must be compatible. If they conflict, accomplishing the immediate desires may hinder the achieving of the long-term goals, and dissatisfaction is the result.

Short-term goals are those that can be achieved in less than a year. Long-term goals are those that will be achieved over a long space of time, that is, anywhere upwards from one year. It is a good idea to set your goals as a family unit. Then everyone will be more eager to work together to reach the goals which the family has set.

The long-term goal of a family may be to buy a home. Their immediate goals may consist of living comfortably in a small apartment, having second-hand furniture and spending only enough on home furnishings to meet immediate needs. Planning their goals the way they have enables them to save each month for the down payment on their new home. Their immediate and long-term goals are compatible.

On the other hand, there is the family who has a long-term goal of buying a home, but their short-term goals include driving a new car and buying new clothes. This family will experience much dissatisfaction and frustration. They will not be able to save much for a down payment if they spend most of their income on clothing and a car. Clearly defined goals in the planning stage can prevent this from happening.

In family housing, goals may center on comfort, convenience, beauty, economy, privacy to think, study, relaxation and on the working out of plans and problems. A family has to decide which goals are important and which ones it will strive for first. Will they buy a car? A washing machine? A larger home or apartment? If the family's first goal is to move to the suburbs, it may need a car to, first, drive around to look for a home and, second, to commute. In the meantime, the family has to settle for an apartment which provides laundry facilities while it buys a car. If the family can purchase a house near a bus stop or transit system, it may cancel the purchasing of a car so that a washing machine can be purchased.

Energy-Efficient Housing

The development of energy-efficient heating in homes is an urgent matter, for although Canada's fossil fuels are in large supply, the supply is finite and depleting. As the traditional sources of energy are used up, they become more expensive.

Energy-efficient homes have been on the Canadian market for several years. With the high cost of fuels, energy-efficient homes are here to stay. Homeowners are viewing energy efficiency as a protection against the worst effects of an uncertain energy future and they are willing to pay the initial cost of building energy-efficient homes. These homes are gradually assuming an increased share of the market and in the near future all new housing starts will be more energy-efficient. This means that homebuyers will not only be concerned by PIT payments (principal, interest and taxes), but PITE (principal, interest, taxes and energy) payments. Energy efficiency is definitely becoming a desirable feature in today's homes.

Benefits of Energy-Efficient Homes

An energy-efficient home is comfortable, with few drafts, no cold walls, healthy humidity levels, reduced noise levels and cool summer temperatures. To a homebuyer valuing comfort, an energy-efficient home is an attractive feature.

What are some advantages of an energy-efficient home?

1. Initially, energy-efficient homes have higher initial PITE (principal, interest, taxes and energy) payments than conventional homes. With raising energy costs, these PITE payments will become less than those for standard homes.
2. It is expected that the resale value of energy-efficient homes will increase. With Canada's energy supply and cost, an energy-efficient home will become an attractive and valuable asset.
3. The cost of achieving energy-efficiency in new construction is usually much less than the cost of upgrading an inefficient home years after its construction. It is better to avoid the extra expenses by building an efficient home in the first place rather than retrofitting one for energy conservation.

The design and construction of energy-efficient homes is guided by four main principles:

1. high levels of insulation,
2. airtight construction,
3. controlled air management, and
4. passive solar design.

Each of the above principles plays a significant role in the energy-efficient home. It is important that high standards of workmanship be maintained. Otherwise full advantages of energy-efficient home construction will not be achieved.

Is a Low Energy Home For You?

How will living in an energy-efficient home affect your family's lifestyle? Many people have visions of living underground, wearing heavy clothes, washing in icy-cold water or reading by a dim light bulb. In actual fact, a low energy home enables one's family to maintain and often improve their lifestyle. If one examines energy-efficient house plans, there are few restrictions on layout or house style.

Family lifestyle has an effect on heating costs. The way a home is operated controls many aspects of energy consumption. Two families of the same size and ages, for example, may find their utility bills differing by a factor of two or more times - even though they occupy identical homes. How often doors or windows are left open, how much hot water is used, whether thermostats are lowered during the night or when no one is home, how many lights are left on all night - these all determine energy use in the home. Low energy habits combined with a well-insulated and sealed home will result in very low energy bills.

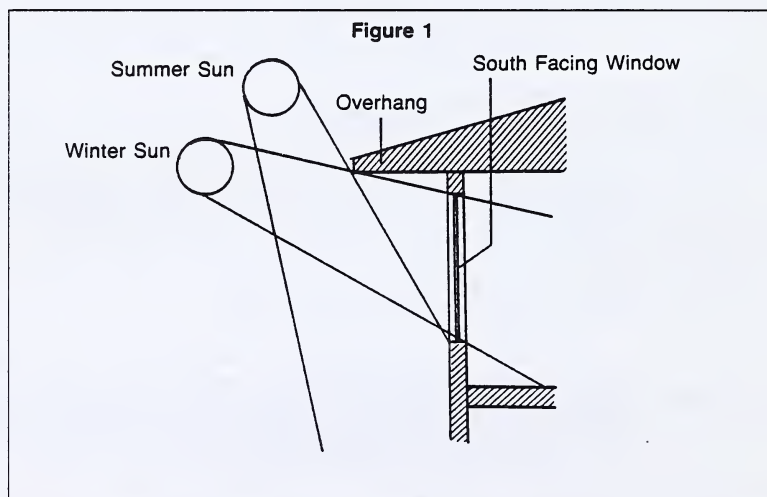
Passive Energy Housing

Besides reducing heat loss, energy-efficient home designs concentrate on optimizing passive solar gain which can supply thirty per cent or more of the heating load of an energy-efficient home. The essence of passive solar gain is the sunshine entering through south-facing windows. Thus, energy-efficient homes are oriented to maximize their unobstructed southern exposure in winter and the windows of the home are usually concentrated on the south side. An energy-efficient house does not usually have more windows than a conventional home but the windows are relocated. This is a cost-free measure.

With a good passive solar design, some change is necessary from the traditional interior layout of homes to accommodate the uneven window distribution. A continuously-operating air circulation system (for example, a low-speed fan circulating air by the usual heating system ducts) is beneficial. This system distributes the solar gains around the home.

Passive solar gain is not confined to the winter months. If not shaded, the summer sun can cause overheating in a conventional home, but more so in a passive solar home. Consequently, protective measures like retractable awnings, movable overhangs or deciduous trees must be provided.

Overhangs admitting winter sun and excluding summer sun must be carefully sized. See Figure 1. The dimensions of the overhang will depend upon the geographic location which affects the angle of the sun and the shape of the windows. The overhang should allow for full sun into the windows until February first.



Use of overhang to limit summer sunshine into house.

Building Regulations

As set out in the Alberta Building Standards Act, any new construction (home or otherwise) in the province requires the approval of the building authority for the locality of construction. That approval comes in the form of a building or a development permit. The local authority that issues permits may be a city, town, village, municipal district, county, or the Minister of Municipal Affairs (in the case of an improvement district or special area).

To obtain a building or development permit, an application is made on a form authorized by the specific authority. A fee is charged based on the value of the construction. Complete and detailed construction drawings are submitted to the local authority along with a site plan showing the development in relation to the property lines and an approved sewage disposal system (Approval comes from the Provincial Plumbing Inspector.).

As well as the detailed construction drawings, the site plan is very important. On the site plan, the relationship of the new home to existing roads, power lines, easements, future development and other factors as may be present in your area can be ascertained and checked. It is much better at this stage to have your building permit rejected than to build a home only to have to immediately move it due to county road expansion or some such future occurrence. A title search can determine if there are any utility or road easements on your property. A visit to local or county offices will determine future developments. Contacting utility companies can be beneficial at this development stage - especially if a new farm site is being developed and services must be extended some distance. Costs, time and coordination factors come into play since telephone, gas and electrical utility companies schedule work months in advance.

The importance of obtaining the necessary permits, approvals, authorizations and utility coordinations cannot be over emphasized. The most logical time to accomplish this, to assure construction will not be delayed, is well before the planned starting time. It is up to you, the owner, to make sure all requirements are met before, during and after construction (depending on the inspection requirements). Each locality has different requirements and procedures. Find them out and follow them to avoid problems and delays.

Regulations governing the use of urban land and the construction and use of residential buildings are found in most of the urbanized areas of the world, varying enormously. Governments exercise varying kinds of control over financial institutions which loan money for housing. Governments impose taxes of various kinds which affect the cost and profitability of acquiring interests in particular kinds of housing property. Governments often supervise or take direct responsibility for the provision of water, power, sewage and transportation facilities as well as education, police and fire services, etc., which influence the usefulness of particular dwellings.

Planning

Our physical surroundings, the houses we live in, the places we work, the parks we play in and the streets we move about in are becoming more the result of a grand design rather than the result of uncontrolled decisions of land developers. Community interests are usually considered more important than the interests of individual property owners. The object of all planning legislation is to regulate the use of land in an orderly and controlled way.

The basic ingredient in community planning is the use of land and its controls, and determination of the most appropriate use. Planning includes undeveloped land as well as land already built upon. Redevelopment must be planned. Private land as well as public land is a community concern. Good planning also calls for the co-ordination of such facilities as public utilities, sewers, transportation and traffic facilities in areas to be developed.

There are two basic aspects of community planning:

1. Physical surroundings of the community: the organization of land use, streets, buildings, recreation areas and other public services. Both beauty and utility are essential.
2. The social and economic relationships and characteristics of the community: family life, recreational, cultural, political and other group activities. Planning seeks to achieve the physical environment that will best promote the economic, social and moral welfare of the inhabitants of the community.

The major goals of planning for residential areas are widely recognized. The most important of these are:

1. protection against physical dangers, particularly fire and explosion,
2. protection against the common law nuisances; noise and vibration, air pollution, etc.,
3. protection against undue traffic, that is, traffic not directly serving the residents of the area,
4. protection against ugliness (aesthetic nuisances),
5. protection against "psychological nuisances" based on irrational dislikes,
6. protection against congestion,
7. protection of light, air and privacy, and
8. provision of open spaces.

Planning in Alberta

The procedure in Alberta respecting regional plans differs somewhat from the rest of the provinces. The regional planning commission decides whether to adopt a plan which has been prepared at its direction without reference to the councils of the municipalities affected; their approval is not required before it becomes effective. Notice must be given of a public hearing by the commission at which representatives of property owners and other interested persons are to be heard. The councils of each municipality and public authority having jurisdiction in the regional planning area may present their objections before the commission. Councils have the right of appeal to the provincial board before the confirmation by a commission of a plan. A regional plan requires the affirmative vote of 2/3 of the commission members present and voting.

Alberta Legislature has made it mandatory for municipalities to enact zoning regulations to implement the plan once it has been adopted.

Zoning

Governments realized it was both necessary and desirable to regulate the size of lots, road patterns, allocation of land for public use and other matters as well as to allow for additional land for residential, commercial and industrial purposes.

Zoning is the political activity which regulates the use of private land. It is the division of a municipality into special areas. In each area some land uses are prohibited and others are allowed. In some areas, only one use can be made of the land for example, single residential dwellings only can be built.

Zoning is a means of carrying out a plan rather than an element in the plan itself. Zoning is a means of maximizing the value of property as determined by market forces. Every piece of property should be used in the manner that will give it the greatest value, without causing a corresponding decrease in the value of other property. Zoning can achieve this goal by prohibiting the construction of "nuisances" (any use which detracts from the value of other property more than it adds to the value of the property on which it is located). Zoning plans offer some degree of co-ordination in land use, primarily the separation of activities that do not complement each other. For example, zoning would probably prevent the building of a stock yard in a neighbourhood of single family houses.

In Alberta the law directs that a zoning by-law be based on a general plan or a survey of existing land uses. Zoning by-laws are imposed on a user of the land, not on the land itself.

Alberta zoning by-laws frequently establish front, side and rear yard setback requirements as well as limitations on the permitted height of buildings and fences. Setback requirements establish the minimum distance back from a street property line to the house or garage, the distance in from both side lot lines that must be maintained clear of buildings, and the distance in from the rear of a lot that must be maintained free of buildings.

The height limitations for houses and apartments is sometimes set forth as a specific number of metres and at other times as a number of stories.

New subdivision designs do not conform to the grid street pattern and today may lots are not rectangular. Thus, complicated formulas for calculating setbacks and height regulations have been added to zoning regulations. Yard setbacks actually define the buildable area within a lot.

Other restrictions often found in zoning by-laws deal with the building design; placement and height of fences, walls, hedges, etc.; street access; outdoor storage; parking and loading facilities and putting up signs or advertisements. These restrictions are important when dealing with site design problems because they influence such things as the location, type, and size of patios, gardens, play areas, service entrances, driveways, etc.

In both new and older neighbourhoods it is important to make a zoning check. Is the area zoned for single family residences only, and is there a minimum size lot requirement for future homes? Are multiple dwellings, stores, office buildings, light or heavy manufacturing permitted?

It is important to know what provisions, if any, are made for changing zoning regulations. There should be some provision for the change of zoning regulations to provide the flexibility necessary to meet the needs of future development.

City of Edmonton Zoning By-laws

A. Building Permits

To do any building, excavating, alterations to a building or land one must have a building permit. To get a building permit one must submit the following information to the appropriate office of City Hall:

1. a site plan in triplicate showing the legal description of the front, rear and side yards, if any, and any provision for off-street loading and vehicular parking,
2. floor plans and elevations and sections and bulk of building in duplicate,
3. a statement of uses,
4. a statement of ownership of land and interest of the application therein, and
5. the estimated starting date.

When an application has been approved, a building permit may be issued.

Any person not acquiring a building permit is subject to a fine of not less than \$100 and not more than \$500, and in the case of non-payment an imprisonment not exceeding six months, unless the fines and costs are paid sooner.

B. By-laws

The City of Edmonton also has laws governing:

1. subdivision of land,
2. minimum yards,
3. projections into yards,
4. objects prohibited in yards,
5. public utility buildings,
6. restrictions on corner sites,
7. fences in residential districts,
8. corner sites,
9. double fronting sites,
10. accessory buildings,
11. off-street vehicular loading and unloading facilities,
12. off-street vehicular parking facilities,
13. development and maintenance requirements for public and private parking areas,
14. parking schedules,
15. general provisions in respect of restricted residential districts,
16. underground gas service lines,
17. public schools,
18. walkways - services sites,
19. walkways - services multiple housing, and
20. property identification signs.

Restrictions

Restrictions governing a site may not permit you to build the house you want. These restrictions may contribute to the increased cost of construction and site development. The usual restrictions are building codes, restricted covenants and easements.

Restricted Covenants—Restricted covenants may restrict the construction, the cost, the type of building, the location of the building or other specific details recorded in the certificate of title.

Building Codes—Building codes generally will involve the structural design, performance standards and specifications for the construction of buildings. They play an important role in site design by setting forth requirements for exterior building materials, window and door sizes, as well as type of foundation, roof drainage, lot grading and standards for free-standing and attached garages, carports, breezeways, etc.

Housing codes usually set forth minimum design standards for various types of dwellings, and minimum maintenance standards which must be met. Some overlap and deal with standards normally found in building codes, that is, the Canadian Plumbing Code 1975; Canadian Heating, Ventilation and Air Conditioning Code 1975; and the Canadian Electrical Code. In general, their primary purpose is to establish minimum overall liveability and maintenance standards which apply to both the interior and exterior parts of the dwelling as well as the lot.

The Associated Committee on the National Building Code of the National Research Council of Canada in 1975 prepared the Residential Standards as a building code for houses and small buildings.

Residential Standards contains the requirements for buildings of residential occupancy from the National Building Code of Canada. It also contains requirements, going beyond the scope of the National Building Code, which are considered necessary to regulate residential construction under a municipal by-law. The builder must meet these standards in order to get a Canada Mortgage and Housing loan.

The Residential Standards cover all areas in housing construction from the excavation of the site to the landscaping of the finished site. The coverage is in great detail.

Copies of the Residential Standards are available from the nearest office of Canada Mortgage and Housing, or write to:

Canada Mortgage and Housing
12315 Stony Plain Road
Edmonton, Alberta
T5N 3C2
Telephone: 482-3431

Easements—Easements are absolute rights granted for use of the property, although such property does not belong to the party involved. Usually limited in scope, these rights are consigned to utility companies, roads, etc. Easements run with the land and usually cannot be cancelled by present owners. They are generally for installation of pipe, sewage, utility lines, etc. under, over or through property, for general community benefit. Previous agreements of this sort are always written into land records, and such conditions can quickly and easily be determined before purchase of a property.

A Community View

The next section of this lesson will deal with neighborhood and community development. Keep your community in mind as you read this information.

Neighborhoods

A neighborhood is made up of the people living near one another. The neighbors should be friendly and be able to get along well together. You want to be able to enjoy your neighbors. A "spirit" is developed by the people living in the neighborhood if the people are active, if they have similar interests and if they participate in community affairs.

A good favorable atmosphere in the neighborhood helps to create a good home environment. When choosing an area in which to establish a residence, a person should consider the atmosphere of the neighborhood.

A well-formed residential area with a high percentage of owner-occupied houses is one of the characteristics of a stable neighborhood. Generally, owners have more pride for their property and look after their houses better than renters. Pride is reflected in the appearance of the whole neighborhood. One bad-looking house can spoil the appearance and value of the entire street. The houses should be well-designed and soundly constructed as well.

The Community

Communities are found everywhere on earth. As you have probably noticed from your own personal experience or from pictures, there are many kinds of communities where human beings live and carry on their work. Even though all these communities are different, they all exist because people want them. The needs of people can be better met through community living than if the individuals or families lived alone.

Through studying a community you will learn that:

1. A community is more than a family, a school, or a neighborhood.
2. A community has facilities for social affairs.
3. Each community serves a definite purpose or purposes in its surrounding area.
4. The purposes a community serves may change.
5. The facilities of the community exist to help people meet their needs.

What is a Community?

A community is a group of people living together in a particular place who have the means for carrying on their common activities.

How do people carry on these activities in order to provide community living?

1. They protect their lives and health.
2. They protect their property.
3. They make, sell, and use goods and people's services.
4. They maintain government and courts to help them live safely, justly and at peace with one another.
5. They provide for the transportation of people and goods.
6. They provide for communication among people in the community group and with people outside.
7. They satisfy their needs for religion and beauty.
8. They have fun and recreation.
9. They carry on education.

Whenever any group of people has the means of carrying on these activities, it forms a complete community. A community, however, cannot live entirely without help from the outside.

The important thing to remember about communities is that they are made up of people. Often people talk about communities as though they were just places on the map or pieces of land. The piece of land, however, is only where the community is located. Communities are "of the people, by the people, and for the people." This is the reason for their existence. You are a part of the community in which you live. Along with others, you and they are your community.

Communities can be rural or urban. Rural communities are usually closer knit because of similar status and economic background. People in rural communities depend more on each other for their fun and recreation than do people in urban situations who have more facilities available.

Customs, Values and Traditions of the Community

The community has an almost universal scope because, for most people, life is still largely lived in the community. The community helps develop, establish and reinforce culture and aid the individual to learn and develop maturity. As a person develops from childhood to youth and on to maturity it is the community that he first comes into contact with all social relationships which extend beyond the narrow limits of the family. In a community, society as a whole becomes real and believable.

Communities have different traditions and ways of doing things. A custom is an accepted behavior pattern for people who occupy a certain status in a community. Customs are carried by tradition and lodged in the group; they are not just different personal activities of the individual. Customary behavior differs in different communities. Customs relieve a person of the responsibility of deciding what one is supposed to do. For example, it is a custom to work for a living.

Community value are those things or achievements that the community considers as good and these are the things that the community seeks to have or achieve. For example, most communities value their education facilities.

Traditions are handed down from the past by word of mouth and example. Some traditions are certain Christmas celebrations, the pride a community has in having good schools, and the patriotism shown by a given community in time of national need.

A community must be pulled together (or integrated) in some manner. One method of integration available to everyone is the local newspaper.

In some cases, when a person changes from one community to another, his social rank and class membership must be re-established. For example, a doctor in a village has more prestige than a doctor in a city because in the city, he or she is just one doctor among many doctors. Professional status remains the same but social position is changed.

An adult human is involved in many relationships apart from the community, but as a child and as a teenager these relationships are usually foreign to him. Social relationships, other than those with the family, are experienced in the community. Along with the family, the neighborhood and the community determine the further development of a person's personality – even in our highly developed industrial societies.

Community Development

Some of the needs of a community include:

- modern schools close at hand,
- convenient shopping facilities,
- large park and recreation areas,
- skating rink, community center, swimming pool, library close by or in the area,
- churches,
- not being too close to busy main roads but within easy access to main artery,
- road maintenance,
- street lights,
- garbage and snow removal,
- protection by fire and police departments,
- mail service,
- transportation (bus and/or taxi service),
- telephone service, and
- adequate housing – apartments, condominiums or single family houses.

Two factors differentiate the human community from all other living associations. These two factors are technology and economy, and they enable man to change his environment more and more radically.

Patterns of Growth

The pattern of growth in a rural area is not as well defined as it is in a city area. The sale or exchange of large tracts of land is how rural areas usually grow and this growth may take years to be noticed. The sale of a farm does not necessarily mean that the population will increase. Therefore, there is no pressure on the towns to expand as commercial or service centers.

A city can grow in three ways — marginal expansion, urban renewal, or satellite city development.

Marginal Expansion — most familiar process

- growth at the edges or fringes of the city
- spreads out along the main roads
- If this growth goes unchecked, it can lead to an unplanned suburban sprawl.

Urban Renewal—growth by rebuilding older areas in the center of the city which have deteriorated or decayed

Satellite City Development — most noticeable and most spectacular

- building is new and complete cities or towns are just outside the perimeter of the older city and are separated from it by parks or greenbelts
- Civic centers with schools, shopping, cultural areas and churches are in each of these satellite cities.
- Satellite cities ease the strain on the facilities of the older city.

How is Growth Controlled?

City planning is how the government (local and national) controls or regulates growth through legislation or laws. There are three kinds of city planning: community planning, zoning and subdivision control.

Community Planning—planning of smaller units (community) that make up the city; a community may be centered on a school or church or it may consist of one or more neighborhoods each with its own schools. The location of streets and their patterns and the location of schools, shopping centers, churches and parks are set out by planning rules.

Zoning—control of areas within the community plan. Zoning laws give specific use to certain areas. For example, only houses are built in residential zones; only stores and shops in commercial zones; and only factories in industrial zones. Parkland should be provided between residential and industrial areas and these greenbelts act as buffers to noise and provide a pleasant view.

Subdivision Control—planning of the zones within the community. It involves streets, parks and schools and the actual layout or siting of the building on the lot. A building is positioned according to its relation to the street and the lines which divide one lot from the next; this is what is called siting. This is what makes street patterns interesting by having some of the buildings set closer to the street than others. Also governed by subdivision control is the size of the building on a given lot; the materials it can be made of; and appropriate, uniform development in an area.

By-laws along with a master plan operate these controls. A master plan shows all the zones, streets and regulations. By-laws are minor rules or laws that are legally binding but can be changed or varied for special circumstances.

Planning A Community

In planning a community, one of the most important considerations is to find out exactly what the community's goals and values are. One must remember that the community's values and goals are just the sum total of the values and goals of the individuals who make up that community.

If a community does not know what resources it has, then it cannot make very good plans for present or future development. Therefore, the second step in community planning is to survey the physical and economic resources of the community and also to consider the future possibilities of this community.

When all of the above matters have been considered, then the master plan can be formed. Remember what the master plan is. Plans must be made for future land use.

Finally controls must be set to carry out the plan.

As you can imagine, since each community is based on the values and goals of its people, each community will be different.



Self-Study Exercises**EXERCISE 1: Multiple Choice**

Select the best possible answer and place the appropriate letter in the space to the left of each question.

- _____ 1. The principles guiding the design and construction of energy-efficient homes are: (Page 16)
- (a) passive solar design.
 - (b) airtight construction.
 - (c) controlled air management.
 - (d) high levels of insulation.
 - (e) all of the above.
- _____ 2. These are a collection of ideas, beliefs and conditions of life that are held by the family members. (Page 11)
- (a) values
 - (b) standards
 - (c) goals
 - (d) resources
- _____ 3. People preferring group living will usually choose a _____ lifestyle. (Page 2)
- (a) supportive
 - (b) influential
 - (c) individualistic
 - (d) communal
- _____ 4. What must be supplied to store the extra solar heat that has been collected? (Page 17)
- (a) collectors
 - (b) thermostats
 - (c) thermal mass
 - (d) radiators
- _____ 5. The physical aspect of community planning includes (Pages 30, 31)
- (a) family life.
 - (b) the organization of land use.
 - (c) recreational activities.
 - (d) cultural and political activities.
- _____ 6. A home is an expression of a family's (Page 5)
- (a) interests.
 - (b) preferences.
 - (c) personalities.
 - (d) activities.
 - (e) all of the above.

- _____ 7. This lifestyle means living simply without many modern conveniences. (Page 2)
- (a) influential
 - (b) individualistic
 - (c) supportive
 - (d) basic
- _____ 8. The approval for building a new house comes in which of the following forms? (Page 19)
- (a) zoning by-law
 - (b) restricted covenant
 - (c) building permit
 - (d) building code
- _____ 9. An example of a short-term goal is (Page 14)
- (a) living comfortably in an apartment.
 - (b) buying a house.
 - (c) having second-hand furniture.
 - (d) both (a) and (c).
- _____ 10. A fee charged to obtain a building permit is based on (Page 19)
- (a) the value of the house.
 - (b) the cost of the building materials.
 - (c) the amount of money the builder has.
 - (d) the cost of the labor.
- _____ 11. The political technique through which the use of the private land is regulated is called _____. (Page 21)
- (a) by-law
 - (b) building permit
 - (c) zoning
 - (d) restricted covenant
- _____ 12. This serves as an aid in understanding and meeting the problems of family life, including the deciding of housing choices. (Page 7)
- (a) long-term goals
 - (b) family life cycle
 - (c) short-term goals
 - (d) instrumental goals

EXERCISE 2: True and False

Carefully read each statement below and decide if it is true or false. If the statement is true, place a **T** on the short blank before the statement. If it is false, place an **F** on the short blank. Correct all false statements by changing only the **highlighted** portion.

- _____ 1. An energy-efficient home *requires significantly less energy for operation* than an average conventional home. (Pages 12–13)
- _____ 2. *Values* are the ends for which a family or individual is willing to work. (Pages 8 and 10)
- _____ 3. Mobility affects *furniture selection and furniture adaptability*. (Page 3)
- _____ 4. *Urban renewal* is the growth of cities at its fringes or edges and its spreading out along the main roads. (Pages 22–23)
- _____ 5. *Dollar savings* is one attraction of an energy-efficient home. (Pages 12–13)
- _____ 6. For a home to be functional, *it must satisfy the needs of the family members for whom it is designed*. (Page 8)
- _____ 7. A *neighborhood* is a group of people living together in a particular place who have the means for carrying on their common activities. (Pages 19–20)
- _____ 8. It is much better *to renovate a conventional home than to build a new home* with energy efficiency in mind – both from a cost and a convenience standpoint. (Page 12)
- _____ 9. Homeowners are viewing every energy efficiency as a *protection against the worst effects of an uncertain energy future*. (Page 11)

- _____ 10. Family lifestyle *has an effect on heating costs*. (Page 12)
-
- _____ 11. *A restricted covenant* sets forth the minimum design standards for various types of buildings. (Pages 18–19)
-
- _____ 12. *A basic lifestyle* is living very simply without too many modern conveniences. (Page 2)
-
- _____ 13. When determining your goals, it is good to look *at both your short-term and long-term objectives*. (Pages 10–11)
-
- _____ 14. People with an individualistic lifestyle *follow their inner feelings and desires, regardless of what other people say*. (Page 1)
-
- _____ 15. The essence of passive solar gain is the sunshine entering through the *east-facing windows*. (Page 13)
-

EXERCISE 1: Matching

For each word in **List A**, find a definition or phrase in **List B** that best describes that word. Write the number of the word in the space provided.

List A**List B**

- | | | |
|---------------------|-------|--|
| 1. newlyweds | _____ | a. Because the home is less busy with the family members gone, the couple may choose to return to a smaller form of housing. (Page 7) |
| 2. beginning family | | |
| 3. expanding family | _____ | b. The cost of furnishing a first home at this stage is very high and couples generally live in an apartment. (Page 6) |
| 4. launching family | _____ | c. This stage is characterized by the first child leaving home and the family home becoming too large. (Page 7) |
| 5. later years | | |
| 6. retirement | _____ | d. In this stage, housing becomes child-focused. (Page 6) |
| | _____ | e. Couples during this period usually live on a fixed income and their choice of housing may be limited. (Page 8) |
| | _____ | f. Extra rooms for studying and entertaining are necessary for the children in this stage of the family life cycle. (Page 7) |
| | _____ | g. The parents have to make room for the child's equipment, furnishings, clothing and activities. (Page 6) |
| | _____ | h. At this stage housing expenses should be kept as low as possible in order to buy furniture, plan for an expanding family and save toward home ownership. (Page 6) |
| | _____ | i. At this stage, family members are beginning to be more concerned with privacy. (Page 7) |

EXERCISE 4: Short Answers

1. List three kinds of city planning and describe each briefly. (Page 23)

(a) _____

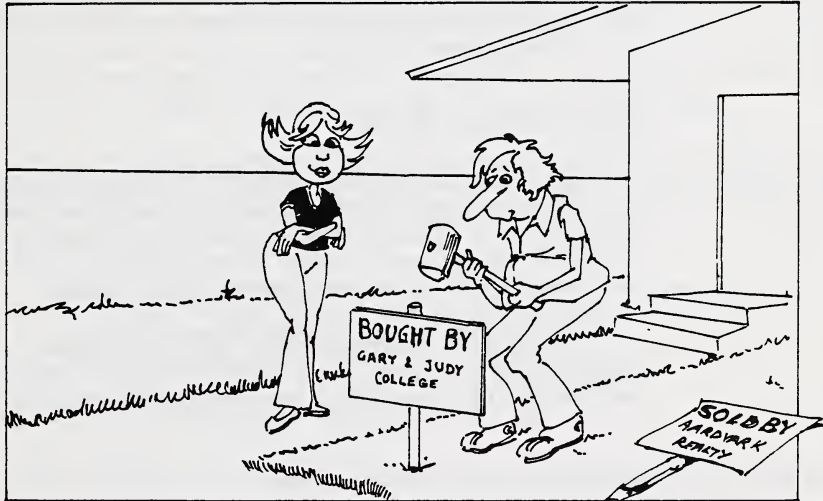
(b) _____

(c) _____

Complete *Exercises 1* and *2* in your Assignment Booklet for Module E: A Study of Housing, now.

BUYING A HOUSE

A house is the largest single investment that most people make in a lifetime. This decision is made with a great deal of careful consideration and financial planning. One must take practical, financial, aesthetic and lifestyle considerations into account when making the decision. Once you find a house that suits your tastes and needs, look at the price of the house, the downpayment, the mortgage, interest rates and the closing costs. Your "dream home" can turn into a nightmare if you cannot afford it.



Before proceeding any further let us go over some housing terms that will be repeated from time to time in this lesson.

1. **Mortgage**—a pledge to repay the loan that has been given to you to help purchase a home. The house is pledged as security for the loan. The loan is paid back in equal monthly installments made up of the principal and interest.
2. **Principal**—the amount you have borrowed. It is that part of the monthly payment which decreases the actual amount of the loan.
3. **Interest**—the cost to you for the use of someone else's money.
4. **Amortization**—the operation of paying off a mortgage over a specified period of time (for example, 25 years).
5. **Collateral**—is something of value that is offered to the lender as a security and which the lender may sell if payments are not met. It could be stocks, bonds, cash or the goods or property itself. In case of default (The term used to describe a borrower's failure to make the payments he has agreed to in a written contract.) The pledged collateral can be seized to pay off what is owing on the loan.

6. **Foreclosure**—means taking over the house and selling or cashing the security to recover the amount loaned. This happens when the buyer has persistently failed to repay the loan and it is used as a last resort when the repayment of the second mortgage seems impossible.
7. **Down Payment**—is the cash difference between the cost of a house and the amount of mortgage or loan that is available. For example, a house costs \$59 000 and a mortgage of \$42 000 has been arranged, the balance of \$17 000 has to be found as a down payment.
8. **Certificate of title**—means the certificate granted by the Registrar of the Land Titles Office and entered and kept in the register. It indicates the legal ownership of the land or property.
9. **Adjustment costs**—these are the expenses involved in buying a house apart from the selling price of the house.

What Can You Afford?

How much can one afford to spend for a house? This is the first question people ask themselves when they first start looking for a home. Now it no longer depends on how much cash you have available. Modern mortgage financing has made it possible for many Canadian families to buy a home principally on credit, and most of them do so. Naturally you will need some cash for a down payment and other expenses.

You should have a general idea of how much mortgage you can qualify for before you begin to hunt for a house. Ask a variety of lenders to review your financial situation and tell you how much money they would be willing to lend you.

Guidelines For Determining The Cost of a Home

The potential home buyer wants to know how much he can safely spend on a home. These factors will affect the spending on a home:

1. family size,
2. family composition,
3. ages of family members,
4. number of family members employed full or part-time,
5. future salary potential of the head of the family,
6. savings on hand,
7. amount of down payment, and
8. what the family members are willing to sacrifice in order to own a home.

Before deciding to buy a home one has to plan for the future. One must consider one's future income and expenses. Allowances for increased expenditure due to family growth, education or providing for elderly people must be made. What about one's financial stability? Is one's job a secure one? If both marriage partners are working, will they both continue to do so in the future?

Many families make the mistake of buying a home that is too expensive for them to afford. Some have to scale down their ideas about their standard of living. It is better for a family to buy a smaller home and enjoy financial stability than to buy an expensive home and worry about finances. Usually a family's first home is not their ultimate dream home. Many families buy a larger home as their needs and income change.

Cost of the Home

The interest rates and the length of the repayment period (amortization) influence the total cost of the home. Amortization period is the length of time that it would take for a mortgage to be paid in full if all the installments were to be made. Thus, a mortgage of \$48 000 repayable in monthly principal payments of \$400.00 (excludes interest payments) would be fully amortized over a period of ten years because at the end of the ten year period there would be no balance to be paid under the mortgage by the mortgagor.

Normal interest rates depend on conditions in the market. When there is not much demand for loans and a great deal of money is available, the interest rate is lower. When demand is high and money is scarce, the rates go up. Rates vary among lenders, in different areas and for different types of loans.

When mortgage money is plentiful, interest rates are low: when mortgage money is scarce, the interest rates are high.

You can save money on the total cost of a home by:

1. making a large down payment,
2. shopping for the lowest interest rate available, and
3. paying off the mortgage in a short period of time.

Obtaining a mortgage at a reasonable rate of interest when you buy a home can save you considerable money over the term of the mortgage.

In the following tables, note the savings at the different interest rates and at different repayment periods on each \$40 000 loan.

Table 1		
Monthly Payments and Total Interest Charges for each \$40 000 Borrowed Over a 25-Year Period at Different Interest Rates		
Interest Rate	Monthly Payment	Total Interest Charges
10 %	\$357.80	\$ 67 340.00
10½ %	371.33	71 399.00
11 %	385.01	75 503.00
11½ %	398.82	79 646.00
12 %	412.76	83 828.00
12½ %	426.81	88 043.00
13 %	440.97	92 291.00
13½ %	455.22	96 566.00
14 %	469.56	100 868.00
14½ %	483.97	105 191.00
15 %	498.46	109 538.00

Table 2				
Monthly Payments for Each \$40 000 Borrowed at 10 and 11 Percent Over Different Repayment Periods				
	10%		11%	
Repayment Period	Monthly Payment	Total Interest Charge	Monthly Payment	Total Interest Charge
10 years	\$524.13	\$22 895.60	\$545.49	\$25 458.80
15 years	424.91	36 483.80	448.53	40 735.40
20 years	380.67	51 360.80	406.26	57 502.40
25 years	361.17	68 351.00	385.01	75 503.00
30 years	348.60	85 496.00	373.58	94 488.80

Next is a table showing the monthly payments necessary to amortize mortgages of different sizes at an interest rate of 13 percent.

Table 3				
Monthly Payment Necessary to Amortize a Mortgage 13%				
Size of Mortgage	Number of Years			
	10	15	20	25
\$20 000	\$294.64	\$248.61	\$229.51	\$220.49
25 000	368.30	310.76	286.89	275.61
30 000	441.96	372.92	344.26	330.73
35 000	515.62	435.07	401.64	385.85
40 000	589.28	497.22	459.02	440.97
45 000	662.94	559.37	516.39	496.09
50 000	736.60	621.51	573.77	551.21

The Price to Pay For a Home

How much should a person pay for a home? There are two rules of thumb.

1. The cost of the home should not exceed $2\frac{1}{2}$ times the buyer's gross annual salary. However, inflation, rising mortgage rates and higher maintenance costs alter this. The purchaser must carefully weigh his needs and desires against his ability to pay.
2. The buyer's mortgage payments should not exceed one week's take-home salary. (One's housing costs should not exceed 25 percent of one's take-home income, that is, net income.)

For example, if the husband's gross salary is \$2 900 per month, the total cost of the home should not be greater than $2\frac{1}{2}$ times his yearly salary of \$34 800. The maximum cost of the home should be \$87 000.

To calculate how much one can afford, one must deduct all monthly expenses including food, clothing, savings, etc. from the monthly take-home income. The amount of income remaining is the maximum monthly payment one can pay for the mortgage payments, taxes, insurance and other household costs.

Next is a list of all items to be considered when estimating the income available for housing. One can use this chart to calculate how much one can afford to pay in monthly payments for a home.

Part I – Dependable Monthly Income

Main Wage-earner's Pay	\$ _____
Main Wage-earner's Other Earnings	\$ _____
Spouse's Pay	\$ _____
Spouse's Other Earnings	\$ _____
All Other Dependable Income	\$ _____
Total Dependable Income	\$ _____

Part II – Monthly Obligations and Salary Deductions

Income Tax	\$ _____
Retirement Payments	\$ _____
Pensions	\$ _____
Insurance Premiums (Life, Medicare, Household)	\$ _____
Automobile and Transportation Expenses (Loan Installment, Insurance, Maintenance, Fuel)	\$ _____
Total:	\$ _____

Deduct the total monthly obligations and salary deductions from the total dependable income.

This results in an amount available for housing and all other living costs. \$ _____

Part III – Present Monthly Housing Expenses

Rent (or mortgage payment)	\$ _____
Heat and Utilities	\$ _____
Maintenance	\$ _____
House Insurance	\$ _____
Taxes (house)	\$ _____

**Total Present Monthly
Housing Expense** \$ _____

Deduct all present monthly housing expenses from housing and all other living costs. The result is the amount of income left for all living costs on the basis of the present housing expense. \$ _____

Part IV – Proposed Monthly Housing Expense

Principal and Interest Payments	\$ _____
Monthly Charges on other Financing, for example, Second Mortgages	\$ _____
Taxes	\$ _____
Heat and Utilities	\$ _____
Maintenance	\$ _____

**Total Proposed Monthly
Housing Expense** \$ _____

Deduct the proposed monthly housing expense from housing and all other living costs in Part II. The result is the amount left for all other living costs on the basis of the proposed housing expense. Compare this figure with the amount left for all living costs under the present housing expense. \$ _____

The following chart gives the major costs that should be considered when purchasing a home. The items on this chart do not necessarily apply to every family buying a home.

Purchasing Costs

Down Payment	\$ _____
Adjustment Costs	\$ _____
Title Search	\$ _____
Legal Fees	\$ _____
Appraisal Fees	\$ _____
Other Charges	\$ _____

Total Purchasing Costs \$ _____

Miscellaneous Initial Costs

Repainting	\$ _____
Other Repairs	\$ _____
Moving Costs	\$ _____
Drapes	\$ _____
Appliances	\$ _____
Furniture	\$ _____
Lawn Equipment	\$ _____
Installing Utilities	\$ _____

Total Initial Costs \$ _____

Monthly Costs

First Mortgage Payment	\$ _____
Second Mortgage Payment	\$ _____
Taxes	\$ _____
Insurance	\$ _____
Fuel	\$ _____
Utilities	\$ _____
Maintenance	\$ _____

Total Monthly Costs \$ _____

What size of down payment should one make? With a large down payment, one can purchase a more expensive house than one could afford with a small down payment. Generally speaking, a high down payment will enable one to obtain a lower interest rate since security for the mortgage is based upon the value of the home and one's ability to repay the loan. Thus, the more money one puts down, the less risk for the lender. It is wise not to put all one's money into a downpayment. Some money should be left for moving costs, adjustment costs, new drapes, repairs, garden equipment, etc.

Adjustment costs include fees to have the title to the house searched and examined to make sure there are no prior claims on it as well as other legal fees. Some of the adjustment costs include:

1. **Title Search**—this involves collecting and examining documents relating to the previous ownership of the property to ensure that there are no claims or liens on the property and that the present owner holds the title clear and free.
2. **Real Estate Taxes**—if the seller has paid taxes beyond the date of closing, you will have to repay him as of the time you take over the property.
3. **Appraisal Fees**—the mortgage lender usually requires an independent appraiser's report on the value of the home. The purchaser of the home is billed for its cost.

4. **Legal Fees**—this includes your own lawyer's fee. On occasion you will be charged for the seller's lawyer's fee as well. Your lawyer can negotiate to have this fee excluded.

Financing Your Home

A *mortgage* is an elaborate I.O.U. with a clause that if the borrower defaults, the lender can sell the house to get his money. In other words the mortgage provides security for the lender. In some cases a second mortgage is required in addition to the first mortgage. With second mortgages the interest rate is higher. It is higher than the first mortgage interest rates because the person taking it has less security than the first mortgagee. His only security is the amount of money remaining from the sale of the house after the first mortgagee has obtained satisfaction.

Mortgagee money is available from many sources. The federal government, through the Central Mortgage and Housing Corporation, supplies mortgage money. Chartered banks issue mortgage money only under the terms of the National Housing Act.

Mortgages are made for a specific amount of money loaned at a specified interest rate. The repayment conditions may vary. The most common type of repayment is the fully amortized one where the mortgage payments are made monthly over the mortgage term. They include the mortgage amount and the interest. Some mortgages are only partially amortized which means that in addition to the regular monthly payments, lump sum payments are made which are not covered by the regular payments.

Borrowers are interested in securing loans of maximum size on their properties. Lenders, on the other hand, look for maximum security. Loans obtained under the auspices of the N.H.A. may not involve the borrower in payments of more than 30 percent of his estimated income.

For a borrower, the mortgage is always a high cost. A fully amortized mortgage of \$40 000 at 13 percent for 25 years will in the end cost \$132 291.00 - this covering both the interest and principal. Even the smallest changes in the interest rate can make a huge difference in the total amount paid. If the above mortgage were obtained at 13½ percent, the total payment would be about \$136 566.00, an added cost of \$4 275.00.

The interest rate varies, depending on the national and local economic conditions. The lowest rates are available through the loans made under the provisions of the N.H.A. Other financing agencies charge different rates, depending on their policy and the risk involved.

If you have obtained a mortgage at a high interest rate, you may refinance it at a lower interest rate (the savings can be substantial). To refinance does cost more (legal fees for searching the title and drawing up the contract, the penalty payments for early prepayment of the mortgage amount) but the savings are greater also. Refinancing the mortgage at a lower rate of interest makes the house more attractive to a buyer if you are selling your home. Be sure to contact your mortgagee if you are considering refinancing. He will probably be eager to refinance at a lower rate of interest rather than lose your business.

All mortgages are for a specified time period. Some mortgages allow the borrower to pay all or part of the debt in advance on specified days. Some form of penalty is levied for early payments to compensate for the mortgagee's loss of interest. This penalty can take one of two forms:

1. a lump sum
2. certain number of months' additional interest

After examining the whole business of mortgages, it is evident that their cost is high. One might be inclined to obtain a minimum mortgage for a short period of time; however, there are many arguments against it. An advantage of a long-term mortgage is that houses with large mortgages and low interest rates sell more easily than those without. A house with a large mortgage can have the mortgage transferred in total to the buyer easily. Also the buyer does not have to come up with a large down payment. Making a large down payment, you decrease the immediate sources of available cash which can be difficult if you need money to furnish or improve your new home.

Qualifying for a Mortgage

The mortgage industry has some general rules that they use to describe how much money you can afford to pay on a mortgage. Lenders will allow up to a maximum of 30% of your gross monthly income to be used as mortgage payment (principal, interest and taxes). Your gross income is your salary prior to deductions such as Income Tax, Canada Pension Plan, Unemployment Insurance, etc. Mortgage companies will allow between 50 and 75% of a second family income to be used in these calculations.

Calculating What You Can Afford for Monthly Mortgage Payments

In order to calculate how much you can afford to spend on a monthly mortgage payment, use the charts below.

One Income Family: Allowable Monthly Payments

Calculate 30% of the income earner's gross monthly income

$$\frac{30}{100} \times \frac{\text{_____}}{\text{(gross monthly income)}} = \frac{\text{_____}}{\text{(allowable total of mortgage, interest and taxes)}}$$

Two Income Family: Allowable Monthly Payments

1. First write down the main wage-earner's gross monthly income

2. Next calculate 75% of the spouse's gross monthly income

$$\frac{75}{100} \times \frac{\text{_____}}{\text{(spouse's gross monthly income)}} = \text{(75% of spouse's gross monthly income)}$$

3. Then add the two totals together:

$$\frac{\text{_____}}{\text{(main wage-earner's gross monthly income)}} + \frac{\text{_____}}{\text{(75% of spouse's gross monthly income)}} = \frac{\text{_____}}{\text{(allowable total family income)}}$$

4. Then calculate 30% of the allowable total family income:

$$\frac{30}{100} \times \frac{\text{allowable total family incomes}}{\text{allowable total of mortgage, interest and taxes}} = \frac{\text{allowable total of mortgage, interest and taxes}}{\text{allowable total of mortgage, interest and taxes}}$$

Calculating Taxes

Often taxes are not included in the payment to the lending institution, but are paid separately. Therefore, after calculating your allowable total monthly mortgage payment, subtract part of this amount for taxes. You may have to guess at this figure. For example, if your total allowable monthly payment is \$775.00 and you estimate \$75.00 a month for taxes, this leaves \$700.00 a month for the rest of the mortgage payment (principal and interest).

$$\frac{\text{allowable total monthly mortgage payment}}{\text{allowable total monthly mortgage payment}} - \frac{\text{taxes}}{\text{taxes}} = \frac{\text{mortgage payment, principal and interest}}{\text{mortgage payment, principal and interest}}$$

Calculating the Principal

Amortization tables, available in bookstores or from the public library or bank managers, are needed to determine the amount of money (principal) you can borrow for the “allowable total monthly mortgage payment”. For example, if current interest rates are 19%, and your allowable monthly mortgage payment, excluding taxes, is approximately \$700.00, you could borrow \$45 000 over 25 years (monthly payment \$693.25) or \$45 000 over 16 years (monthly payment \$725.60).

Calculating Your Consumer Debit

Mortgage companies are also interested in your indebtedness in other areas. They generally feel that your consumer debt should be no larger than 10% of your gross monthly income. Use the following chart to calculate the total amount of your consumer debt load.

MONEY OWING ON CONSUMER LOANS		
Name of Company	Monthly Payment	Full Amount Owning
TOTALS		

Is the total less than 10% of your gross annual income?

Taxes

Money will have to be set aside if taxes are not included in your mortgage payment. Taxes can be paid annually or monthly in some localities. Check regulations in your area. Taxes will also vary in amount depending on local development.

The Down Payment

The **down payment** is cash put up by the buyer to purchase the house. It includes the deposit given with the offer to purchase. Mortgage companies like the buyer to have between 10% and 25% of the purchase price of a new house. The rest of the cost of the house is paid for over time by mortgage.

On previously occupied houses, the buyer may pay the owner a cash down payment to the extent of the owner's equity and take over the existing mortgage. It works this way, say the house you wish to buy was purchased by the owner for \$50 000. At that time he put down 10% or \$5 000 and took a mortgage for \$45 000 at a rate of 10% over 20 years fixed term. Minus his mortgage payments and a few cash deposits the owner still owes \$40 000 on his house. The owner is now selling his house for \$75 000. In order to purchase the house you will pay the owner \$35 000 cash (\$75 000 - \$40 000) and take over his mortgage payments.

Some people own their houses outright, technically referred to as having "clear title." In this case the buyer would arrange to pay for the house in a similar way to a new house. The buyer would borrow money from a mortgage granting institution, satisfying them with a down payment and the owner would receive the down payment and the principal or the total payment of the house.

Closing Costs

Closing costs include all charges and fees incurred in transferring ownership of your new home. They may include any or all of the following:

	Amount
	\$
Bonus – If you deal with a mortgage broker, not directly with a bank or trust company, you are often charged a placement fee amounting to approximately 1% of the amount to be mortgaged. For example, on a \$70 000 mortgage you would pay 1% or \$700.	
Survey – The lender may require a property survey to determine the precise location of the house and property.	
Appraisal – The lender may require an appraisal of the property.	
Legal Fees – These are charged by a lawyer for any legal work concerned with the house purchase. Fees vary according to services.	
Title Search – The records of previous ownership and sale of the home will be examined to establish that the seller has the right to sell it to you. This is usually done at the Land Titles Office by your lawyer, but you can do it yourself.	
Preparation of Documents – The title, mortgage and other papers necessary to transact the sale must be prepared. This is done by your lawyer.	
Adjustment of Prepaid Items – Any expenses, such as taxes, which have been paid for in advance by the previous owner will be partially reimbursed by the new owner. Adjustments are made by figuring out the length of time the premises are occupied by each party.	

Mortgage Insurance —This is a fee paid to company or government agency which guarantees the lender against loss if the lender has to foreclose. This insurance is required by financial institutions on loans which exceed 75% of the property's value. This insurance does not protect the buyer.	Amount
Fire Insurance —You may be required to obtain fire insurance totalling the amount of the loan and payable to the lender.	
Total Closing Costs	

MISCELLANEOUS EXPENSES	Amount
Moving Expenses —Obtain an estimate from a local moving firm or determine costs to move yourself.	
Utility hook-ups —These are fees charged for connecting such things as the telephone, gas, electricity.	
Appliance hook-ups —Special outlets may have to be installed for the washer or dryer, etc.	
Major Appliances —When moving from an apartment, you will likely need at least two major appliances immediately, the stove and refrigerator. You might arrange to purchase some of the appliances from the previous owner. Sometimes these are part of the purchase package especially in condominiums or duplexes.	
Repairs —You may have some immediate renovations to do, especially if the mortgage company withholds some of the mortgage funds, on the condition that specified repairs are made. These repairs may be necessary if you are buying an older house. If you do the work yourself you may have to buy tools in addition to materials.	
Decorating —New carpeting, curtains, painting or wallpapering may have to be considered, as well as some landscaping.	
Purchase of Outdoor Care Equipment —These items might include lawn tools, garbage cans, and a snow shovel.	
Total Miscellaneous Costs	

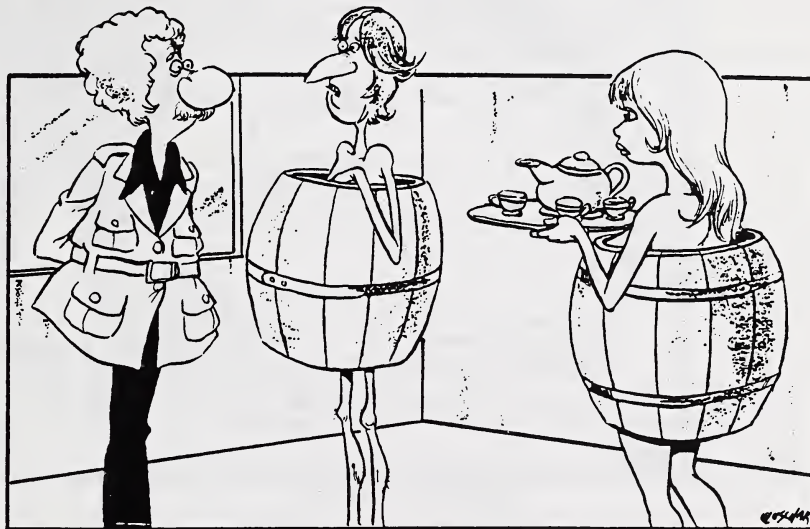
Current Assets

You must have enough money saved to cover expenses for the down payment, the closing costs and for the immediate miscellaneous expenses. Use the chart below to calculate your current assets.

Money in Savings Accounts	_____
Guaranteed Income Certificates	_____
Savings Bonds	_____
Registered Home Owner's Savings Plan	_____
_____	_____
_____	_____
Total	_____

. . . But Can You Afford To Live There?

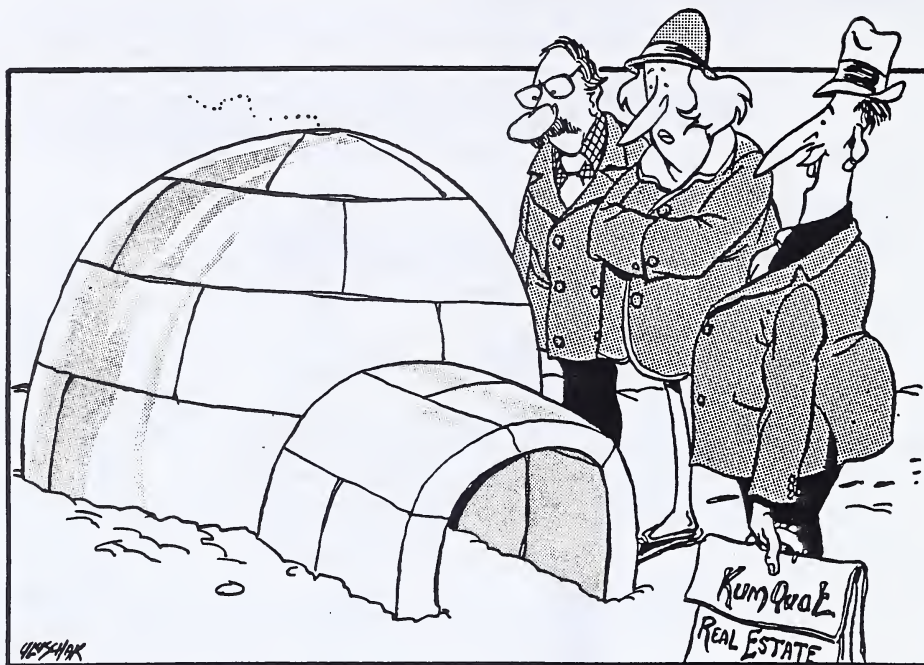
Once you qualify for the mortgage and have enough money for the down payment, closing costs and the moving-in costs, the final decision about whether or not you can afford to live in the house is yours. The two budget worksheets on pages 13 to 16 will help you determine what it will be like to live in your new home. They will also show you in advance whether or not you will have to reduce spending in any category.



**“ Of course we had to give up a few things to
be able to afford this house... ”**

MONTHLY TAKE HOME INCOME	
List only regular income, not money you receive for occasional overtime or moonlighting. List your take home income, that is, what you have left after deductions.	
SOURCE	MONTHLY AMOUNT
1. Wages/Salary	
2. Wages/Salary	
3. Family Allowance	
4. Other	
5. Total Monthly Take Home Income	

"Just think, madam — no corners to dust!"



IRREGULAR AND ANNUAL EXPENSES		
All figures on this chart should be annual not monthly amounts.		
ITEM		ANNUAL AMOUNT
6. Insurance (Do not include those payments which are deducted from your paycheque.)	Car	
	Life	
	Property	
	Medical	
7.	Annual Vacation and Other Travel	
8.	Christmas Expenses and Gifts	
9.	Other Gifts and Contributions	
10.	Car Maintenance	
11.	Household Maintenance (Furniture and appliance repair, cleaning, etc.)	
12.	Car and Other Licenses	

IRREGULAR AND ANNUAL EXPENSES CONTINUED	
ITEM	ANNUAL AMOUNT
13. Membership Fees	
14. Tuition and School Supplies	
15. Dental and Optical	
16. Taxes (Property and income taxes if paid in annual lump sum)	
17. Clothing	
18. Medication	
19. Other (Use these spaces to list other irregular and annual expenses or for items you plan to purchase in the next year.)	
20. Total Irregular and Annual Expenses (Add lines #6 to #19 inclusive)	
21. Monthly Requirement for Irregular & Annual Expenses (Divide line #20 by 12)	

MONTHLY EXPENSES	
All figures on this chart should be monthly amounts.	
ITEM	ANNUAL AMOUNT
22. Monthly Requirement for Irregular & Annual Expenses (Transfer from line #21)	
23. Savings	Emergency Fund
	Replacement Fund
	Long Term Savings Fund
24. Food (Include money for paper products and cleaning supplies. Do not include money for meals purchased away from home.)	
25. Mortgage – Interest and Principal	
26. Utilities	Light
	Water/Sewage
	Local Telephone
	Long Distance Telephone
	Natural Gas
	Cable T.V.
27. Household Incidentals (Newspaper, stamps, etc.)	

MONTHLY EXPENSES CONTINUED		
ITEM		ANNUAL AMOUNT
28.	Gasoline (All other transportation expenses are accounted for elsewhere)	
29.	Bus Fares, Taxis, Parking	
30.	Payments (List each of your creditors and the monthly amount owing.)	
31.	Personal Allowance (This includes money for personal items such as cosmetics & haircuts & money for work or school related items such as lunch and coffee money.)	
	Husband	
	Wife	
	Child	
	Child	
	Child	
	Child	
32.	Recreation & Entertainment	
33.	Tobacco Products / Alcohol	
34.	Other	
Total Monthly Expenses		

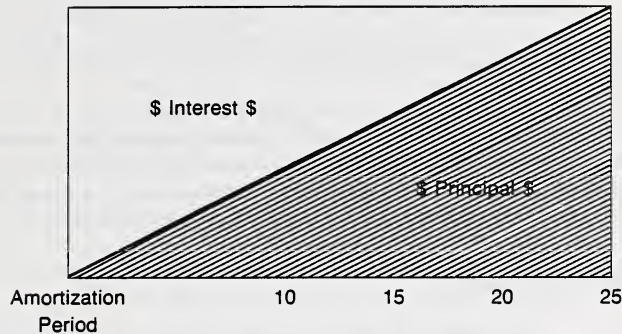
Financing Your New Home – Your Mortgage

A loan on real estate, a mortgage, is the usual way for a person to purchase a home. There are several types of mortgage arrangements available, as well as a range of interest rates offered. Take time and care to shop for a mortgage in order to obtain the best possible deal.

What is a Mortgage Payment?

The mortgage payment consists of two parts; the amount you pay on the principal and the amount you pay in interest. In the beginning, your payments primarily consist of interest, with very little money going toward the principal. At the end of the loan, the principal becomes the main part of the payment with interest making up a smaller amount. See the chart on page 17.

Mortgage Payments: Principal and Interest



Amortization Periods and Terms

When arranging a mortgage, besides the interest rate, there are two other factors that require consideration — the amortization period and the term. The **amortization period** is the *number of years it will take to repay a loan at the agreed monthly payment*. A longer amortization period may slightly reduce your monthly payments but greatly increases the total cost of the loan. The **mortgage term** is the *period of time at the end of which the loan becomes due*. The mortgage term used to be the same length as the amortization period. However, due to changing interest rates, mortgage terms now vary in length from six months to seven years. When the term expires, a new mortgage is negotiated at current interest rates. The interest rate may vary depending on the length of the term you decide to take.

Open and Closed Mortgages

Mortgage terms may be open or closed. An **open mortgage** allows the borrower to prepay all or part of the principal amount at any time without notice or penalty. All of the extra payment is applied to the principal which reduces the length of the loan and the interest payment. However, the interest rates for an open mortgage are usually higher than for a closed one. A **closed mortgage** specifies if and when you can make extra payments on the principal, which help pay off your mortgage sooner. Usually there is an extra interest charge or penalty in closed mortgages if you wish to prepay.

Some closed mortgages allow for a prepayment each year without penalty charges on the mortgage anniversary date — the day the mortgage term was taken. This is normally limited to a percentage of the total mortgage.

If you were to have an \$80 000 mortgage at 18½% with a 25 year amortization period, and you were able to pay \$1 000 against the principal every year, you would pay off your mortgage in 15 years rather than in 25 years. By prepaying, your total cost would be \$209 422.00, rather than \$360 825.00. This is a savings of \$151 403.00.

The Packaged Mortgage

The packaged mortgage contract allows the borrower to include equipment for the laundry and kitchen, carpeting and other items under one contract. Usually these items are worn out by the time the mortgage is paid off or liquidated. This type of contract may be an advantage for buyers who have little or no cash reserves to pay for necessary equipment.

Shopping for a Mortgage

Mortgages are available from banks, Treasury Branches, Credit Unions, Trust and Life Insurance companies and Mortgage and Investment companies. A range of interest rates and terms will be available. Shop around and talk to various mortgage loan institutions before making your final decision.

Mortgages are also available through mortgage brokers for a fee. A mortgage broker arranges mortgages by finding lending institutions, insurance companies or private sources that loan money for mortgages. He can usually offer a wider range of interest rates and terms than other sources. Depending on the terms and interest rates offered and the amount of the fee, you will have to decide if using his services will be to your advantage.

Shop Around for a Mortgage

Find a mortgage at the lowest interest rate over the shortest amortization period (or overall payment period of the loan) with monthly payments you can afford. This example shows you why.

EFFECT OF DIFFERENT REPAYMENT PERIODS ON AN \$80 000.00 MORTGAGE AT 18½%			
Situation	Payment Period	Monthly Payment	Total Payment
#1	15 years	\$1 278.27	\$230 088.60
#2	20 years	1 223.88	293 731.20
#3	25 years	1 202.75	360 825.00

If you choose situation #1, you will pay \$54.39 more per month than in situation #2, but this will save you \$63 642.60 in interest. If you choose situation #2, you will pay \$21.13 more per month than in situation #3, but this will save you \$67 093.80. The shorter the amortization period, the less time it will take you to pay for your home, and the more money you will save by paying interest over a shorter period of time.

Types of Mortgages

There are several types of mortgages. The basic and most popular ones are explained below. However, there are some questions you should ask when shopping for a mortgage. They are:

1. How long will it take for the loan to go through?
2. What is the interest rate and what will the total interest be over the life of the mortgage? Is the interest rate subject to change during the term of the mortgage?
3. How much will the monthly payments be, and for how many years?
4. Do payments include taxes or what extra costs will you be called upon to pay in addition to the regular mortgage payment?
5. In what manner are payments to be made, and is there a period of grace for lateness?
6. Can the mortgage be paid off in advance, without penalty and will this be written into the contract?

First Mortgages

Mortgage companies are usually regulated to allow mortgage financing only up to 75 percent of the value of the property, leaving a 25 percent down payment.

1. **Conventional Mortgages** with a one to five year term are issued from approved lending institutions such as banks, Trust Companies, Treasury Branches or Credit Unions. Normally you can borrow up to 75% of the appraised value of the house and lot leaving 25% to be covered by a down payment. There may be a maximum dollar amount which can be borrowed. Conventional mortgages normally are amortized for periods of 20 to 40 years and are available for new and existing houses. For this loan the only security offered is the property itself and the borrower's own credit worth.
2. **High Ratio Mortgages** allow the borrower to mortgage 75% to 97% of the appraised value of the house and lot. This leaves only 5% to 10% to be covered by a down payment. High ratio mortgages are available from approved lending organizations. These mortgages are amortized for periods of up to 30 years and are available for new and existing houses. The insurance rate is set by the lender. These mortgages must be insured and there may be an application fee.
 - (a) **National Housing Act Mortgages** are made under the terms of the National Housing Act. They usually have a lower rate of interest and require a smaller down payment. However, there may be an application fee. They can be obtained from private lending agencies with **Canada Mortgage & Housing Corporation (CMHC)** funds. The terms of NHA loans are similar to those for high ratio mortgages with a ceiling placed on the maximum loan. Mortgage insurance is required.
 - (b) **Alberta Home Mortgage Corporation** offers high ratio mortgages similar to NHA. They will also subsidize mortgage payments. Percentages for these subsidies will vary depending on how much you earn. Usually the borrower must be able to put down at least 5% for the down payment. For more information on this program, contact the local Alberta Home Mortgage Corporation office.
3. **The Graduated Payment Mortgage** was introduced by the Canada Mortgage & Housing Corporation. The program was designed for young people buying low-priced housing. With this program you can borrow up to 85% of the value of the house.

The monthly mortgage payments are lower in the early years of ownership. For example, first year payments are reduced from conventional charges. Payments are boosted 5% annually until year ten, when they stabilize until the loan expires. For the first five years, payments are less than conventional mortgage payments.

Some cautions, when using this mortgage plan, are necessary. Remember the payments increase yearly. It is important that your earning power will rise to cover the larger upcoming mortgage payments and increases with the cost of living. Early lower payments do not help reduce the principal. The interest rates for Graduated Payment Mortgage plans are higher than conventional mortgages. The total debt after year six will be more than when the mortgage was started and total payments over the life of the loan will exceed conventional mortgage payments.

4. **Floating Interest Rate Mortgages** let the lender raise or lower the interest rate during the life of the loan to keep up with the changes in interest rates. Variations of this type of mortgage arrangement are currently being offered by Credit Unions, as well as other lenders. Credit Unions offer three different types of plans for a floating interest rate mortgage.

The first plan sets the interest rate at the Credit Union's prime rate of interest plus one, two or three per cent. This approach allows the interest rate to float and change when the Credit Union's prime rate of interest changes. The monthly payments that the consumer makes change whenever the interest rate does. The next plan, often called variable interest rate mortgages, has the consumer take the mortgage out at a set rate of interest, say 20%. The repayment schedule is prepared on the basis of this 20% interest rate. However, if the interest rate drops then the difference between the current interest rates and the 20% set rate is applied to the principal balance of the loan. Another plan allows an informal payment arrangement between the Credit Union and the member with the mortgage "payable on demand". This calls for regular payments, but with an interest rate that may vary from time to time depending on whatever interest rate is in effect. Unlike the previous plans, there is no maximum limit the payments may rise. If the member does not like the interest rate that he has to pay, then he can look elsewhere to make other mortgage arrangements. However, if he decides to do so, the Credit Union can demand that he pay their loan in full immediately. A borrower planning to use any flexible rate mortgage should do so only if his budget has room for a possible increase in mortgage payments.

Second Mortgages

If you qualify, second mortgages are available if you need to borrow money for the down payment. These mortgages are usually available for a limited amount, and carry a higher interest rate than first mortgages. Amortization periods for second mortgages vary up to 25 years. Terms are available up to 3 years. As with first mortgages, it is important to shop around.

To calculate the second mortgage, subtract the first mortgage from the cost of the home. This total becomes the money still needed to buy the home. From this figure, subtract the savings on hand. This becomes the second mortgage. For example:

John and Helen are purchasing a home for \$86 000. They can receive financing from the Treasury Branch for \$59 000. They have \$15 000 saved for their home. How much of a second mortgage will they require in order to purchase their home?

Cost of home	=	\$86 000	
First Mortgage	=	<u>\$59 000</u>	
		\$27 000	— becomes the money still needed to buy the home
savings		<u>\$15 000</u>	
		\$12 000	— becomes the second mortgage

Assuming a Mortgage

Rather than making arrangements for a new mortgage, sometimes you can assume a mortgage on an existing house. This means that you take over the mortgage payments and the arrangements of the mortgage made by the previous owner. For example, say that you have purchased an older home. On this home there exists a mortgage of \$50 000.00 with the term for 5 years at 13 $\frac{3}{4}$ %. This would mean that you would continue making the arranged payments at this interest rate until the term is up. When the term is up, of course, you have to re-negotiate the term which would be at the new interest rate.

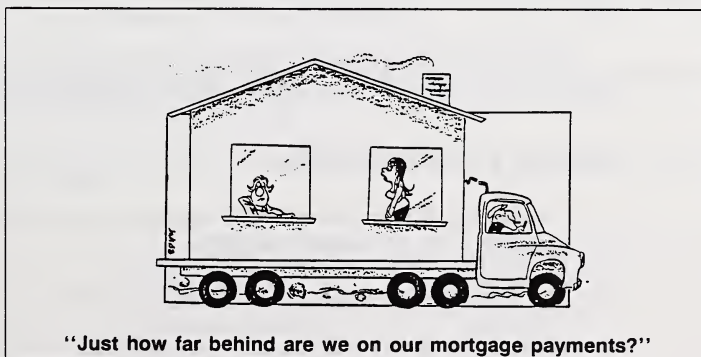
You may have to submit to a credit check and qualify if you are planning to assume a mortgage. Generally speaking, it is easier to assume a mortgage than to arrange for a new one. However, remember that if you have assumed a mortgage at a low interest rate, make sure you know when the term ends. At this time the term will be re-negotiated at the new interest rate. The difference between the payments may be very high. **Make sure that you will be able to afford the mortgage payments at the current rate of interest.**

Mortgage Insurance

If a borrower wants to make certain that the mortgage will be paid in full in the event of his/her death, mortgage insurance is taken out to cover the outstanding amount of the mortgage.

Important Points to Remember About Mortgages

- Shop around carefully for a mortgage. Interest rates and terms will vary.
- A larger down payment and a shorter amortization period are better for you. Although your monthly payments may be slightly higher, the interest saved is substantial.
- Choose mortgage terms that allow you to prepay without a penalty.
- A high ratio mortgage may be preferable to a second mortgage, depending on your individual circumstances.



Real Estate Agent

The real estate salesperson usually knows property and marketing, and will be able to help you find a house in a suitable neighbourhood, at a price you can afford. But the salesperson's primary role is negotiating the sale of property between seller and buyer. In negotiations, the salesperson represents the seller. The salesperson is paid a commission from the sale of the property by the seller, and has a duty to obtain the best acceptable price for the seller. You can buy real estate without the services of a real estate salesperson, if you have the knowledge and time to devote to this task.

A real estate agent becomes an important part of your life at the time you decide to buy or sell. In most cases it is a good idea to use a real estate agent if you are moving into an unfamiliar town or community. He serves as a clearing house and a screening process for you. He will be able to save you considerable time and effort which you would expend looking at houses unsuitable for you and your family. The agent assists in negotiating contracts, making appointments and generally he protects your interests.

If you are buying, when you have checked his business reputation and found it above reproach, you can usually put your faith in him. Check with at least two or three banks or building and loan associations. They will be glad to recommend realtors with whom they have dealt over the years. These institutions will detect and denounce even the slightest unethical activities.

When buying through a real estate agent, keep in mind that the statements made by him in showing the property are generally neither official nor enforceable. Answers about zoning, restrictions, taxes, assessments, easements, right of way and future development plans for the neighbourhood should be double checked through the appropriate municipal agent.

Legal Assistance

The buying or selling of any property presents many potential legal booby traps, and whether you are buying or selling, you should have an experienced lawyer represent you during all phases of the transaction. What may be routine handling on his part may prevent the loss of thousands of dollars to you. Your lawyer will be responsible to read, explain and check all written transactions and agreements and for drawing up all contracts and for determining what is to be considered "part of the house" and what might be charged extra as appliances and added improvements. Your lawyer can keep you out of trouble and give good advice.

If you are building your own home, legal services are even more important for drawing up the various contracts and agreements and for keeping a trained eye on the many transactions.

Services a Lawyer Performs

1. The lawyer checks for existing mortgages if sale is part cash, with the balance through assumption of an existing mortgage.
2. He checks accrued and unpaid interest you assume on existing mortgages.
3. The lawyer determines that all taxes are paid by the seller for past years, and his proportionate part of taxes for the current year up to the date of sale.

- 4. The lawyer determines whether or not utility bills have been paid to date.
- 5. He secures proper receipts for release fees and recording charges.
- 6. He checks the title of the property at the Land Titles Office back to the beginning of the property record which establishes clear, uncontested ownership up to and including the date of the survey. The search should reveal any legal claims against the property in the form of mortgages, judgments, liens, taxes, assessments, rights of heirs or previous owners and similar items.

Your Lawyer Will Also Secure

- 1. a legal and properly executed certificate of title,
- 2. proper abstract, title policy or survey,
- 3. bill of sale covering possible personal property involved in the transaction such as rugs, drapes, appliances, etc.,
- 4. duly signed receipts for money paid into purchase price,
- 5. statement from lending institutions showing the full amount due on the loan, so that later claims cannot be made that a greater amount is due.
- 6. proper fire and casualty insurance policies that adequately cover the cost and needs for your protection as well as the lending agency,
- 7. up to date receipts on taxes, special assessments and other municipal obligations, and
- 8. possession for you in accordance with the Offer of Purchase and Sale which is usually on the closing date by a transfer of a key.

Have a lawyer from the very beginning, so he may supervise every step of the proceedings. It is important to get complete legal advice **prior to** preparation of the offer and subsequently to have the document reviewed by the lawyer prior to execution. It is often difficult and sometimes impossible for a lawyer to unravel things when you discover that someone has blundered or an unintentional error has been made.

Before retaining a lawyer you should first determine that he does real estate work and secondly, what his price range will be.

The following chart will give you an idea of the normal lawyer's fee for the purchase or sale of real estate.

Value of Property	Fee
Value to \$50 000	\$250.00
\$50 000 to \$100 000	\$300.00
\$100 000 to \$200 000	\$375.00

On the excess over \$200 000, additional fees may be charged; the amount to be determined by the time spent, the complexity of the transactions and the amount involved.

In most cases the charge for legal fees is more than repaid in savings and in all cases, the peace of mind in knowing the deal is clear, legal and final is certainly worth the fee.

When paying off a mortgage the assistance of one's legal advisor should be obtained. A letter should be written to the mortgagee advising of the intent to pay off the mortgage at a specific date and requesting a mortgage statement of the mortgage account as of that date. In addition, the lawyer should request a discharge of the mortgage to be held in readiness to be exchanged for the final payment. The statement of account should be compared with your records in order to check that the final amount paid is the correct figure.

Making an Offer

Most home purchases are financed through mortgage loans. At the time of making an offer to purchase, the purchaser will not know if he can get a mortgage. This can only be determined once the purchaser applies for the mortgage loan and if the loan is approved by the mortgage lender. If an offer is made to purchase a house without the offer being "subject to" the purchaser being able to obtain a mortgage, then the purchaser will, at minimum, lose his deposit if he cannot obtain a mortgage loan.

It is therefore very important that the purchaser make his offer "subject to" obtaining a mortgage on specified terms by a certain date. The "subject to" clause should also provide that if the purchaser cannot arrange such a loan within the time specified, then the purchaser's deposit will be returned in full and all obligation between the vendor and purchaser are at an end.

Where a real estate contract contains a "subject to" clause (a contract comes into being when the buyer's offer is accepted by the vendor) the contract is a binding agreement. This "subject to" clause does two things. It:

- (a) ties up the vendor's property until the conditions are met, and
- (b) protects the purchaser in the event that he cannot find a mortgage.

Offer to Purchase

The Offer to Purchase is the first step in a sale between the vendor (seller) and the buyer. In it, the buyer sets out the terms of his offer, signs the document and offers a deposit. If the seller accepts the terms, he signs the document which then becomes an Interim Agreement. This is a legally binding document. It is called an Interim Agreement because further legal documents are required in order to complete the transaction.

The deposit shows that you are making an offer in good faith. The deposit guarantees that the transaction will be completed within a reasonable time and it binds the seller so that he cannot sell the property to someone else. If the vendor refuses your offer, the deposit is returned to you. On the other hand, if the vendor accepts the offer and you are not able to finance the deal, you will have to forfeit the deposit, unless you have an attached "subject to" clause.

In the meantime the lawyer searches the title of the property (The title is the legal term for ownership of the property and it is in the form of a document called a certificate of title.). Sometimes the title is subject to encumbrances or restrictions due to unpaid taxes or legal claims by other people against the present owner and his property. These claims are registered against the certificate of title and are recorded on it. When this happens, the seller does not have clear title or ownership of the property and he cannot legally sell it unless these encumbrances have been removed.

Generally, an offer to Purchase should include the following information:

Name and address of purchaser.

Legal description of the property in question.

Financial details—This includes the price offered, down payment, deposit and mortgage details.

“Subject to” clauses—These include any conditions that the buyer may wish to specify. If the conditions are not met, the contract becomes void. The house may be purchased “subject to” some repairs, finding suitable financing, approval of lawyer, or inspection by appraiser or architect. “Subject To” clauses may protect you, but they may also lose you the property. The vendor is more likely to accept a simple offer that does not tie up the property. Protect yourself with “subject to” clauses, but keep the time limits short.

Chattels—These are items on the property to be included in the price of the house.

Expiry date—This is the date and time at which the offer expires.

Adjustment date—The date when the purchaser assumes responsibility for any prepaid expenses such as taxes.

Possession date—The date upon which physical possession is transferred to the new owner.

Completion/Closing date—The date by which all documents must be signed, and when the title is transferred and the purchase price is paid.

New Home Certification Program

Builders may register houses with the New Home Certification Program. For a fee paid by the builder the home owner is insured against problems with the structure, building materials and workmanship in the first year. For an additional four years structural problems are covered. For a list of contractors who participate in the program and more information, contact the local New Home Certification Program or Alberta office of the Housing and Urban Development Program (HUDAC) office.

Used Home Warranty Program

Vendors will sometimes arrange to insure used homes for the buyer against the breakdown of utility system (plumbing, heating and electrical), some structural failure, and for living expenses if the house becomes uninhabitable. Most of these plans include a deductible feature that the buyer pays.

Check the plan. Know whether it will in fact offer you any protection.

Self-Study Exercises**EXERCISE 1: Multiple Choice**

Select the best possible answer and place the appropriate letter in the space to the left of each question.

- _____ 1. A person earning \$30 000 a year can afford a house costing (Page 5)
- (a) \$55 000.
 - (b) \$60 000.
 - (c) \$70 000.
 - (d) \$75 000.
- _____ 2. To determine the precise location of the house and property, a lender may require a property (Page 11)
- (a) appraisal.
 - (b) survey.
 - (c) title search.
 - (d) adjustment cost.
- _____ 3. These mortgages usually have a lower rate of interest and require a smaller down payment. (Page 19)
- (a) Floating Interest Rate
 - (b) High Ratio Mortgages
 - (c) National Housing Act
 - (d) Conventional
- _____ 4. Which of the following are included in adjustment costs? (Pages 7–8)
- (a) title search
 - (b) appraisal fees
 - (c) legal fees
 - (d) all of the above
- _____ 5. The amount of money that is available for housing is determined by (Page 2)
- (a) size of family.
 - (b) total income.
 - (c) other expenditure.
 - (d) all of the above.
- _____ 6. In this mortgage contract, the borrower includes equipment for laundry and kitchen and carpeting. (Page 17)
- (a) first
 - (b) packaged
 - (c) opened
 - (d) closed

- _____ 7. With this type of mortgage, repayment is allowed at any time. (Page 17)
- (a) open
 - (b) second
 - (c) closed
 - (d) first
- _____ 8. When a mortgage company finances more than 75 percent of the value of the property, the loan is called (Page 19)
- (a) a conventional mortgage.
 - (b) a graduated payment mortgage.
 - (c) a floating interest rate mortgage.
 - (d) a high ratio mortgage.
- _____ 9. A good standing rule for the amount of money one should pay for housing is (Page 5)
- (a) the monthly payment should not exceed one week of salary.
 - (b) the total yearly payment should be about one half the yearly salary.
 - (c) the monthly payment should be about one half the monthly salary.
 - (d) the total yearly payment should be about one third the yearly salary.

EXERCISE 2: True and False

Carefully read each statement below and decide if it is true or false. If the statement is true, place a **T** in the short blank before the statement. If it is false, place an **F** on the short blank. Correct all false statements by changing only the *highlighted* portion.

- _____ 1. Monthly payments including taxes should not be more than **60%** of your gross monthly income. (Page 9)
- _____ 2. To qualify for a mortgage, most mortgage companies like the buyer to have a down payment of between **10 to 25%** of the purchase price of the home. (Page 11)
- _____ 3. A longer amortization period *reduces monthly payments and increases the total cost of the loan.* (Page 17)
- _____ 4. To save money on the total cost of a home *one can shop for the lowest interest rate available.* (Page 3)

- _____ 5. *Mortgage money is the same all over* — it is not necessary to shop around for credit. (Page 18)
-
- _____ 6. Before hiring a lawyer, *first determine if he does real estate work, and second, what his price range will be.* (Page 23)
-
- _____ 7. The “*subject to*” clause protects the buyer in the event that he cannot make the terms of the binding agreement. (Pages 24)
-
- _____ 8. A title search is generally done *at the Land Titles Office by your lawyer.* (Page 23)
-
- _____ 9. Mortgage money is plentiful when the *interest rates are high.* (Page 3)
-
- _____ 10. Substantial interest is saved when the *down payment is large and the amortization period is short.* (Page 3)
-
- _____ 11. *An offer to purchase* is a written expression of the desire to purchase. (Page 24)
-
- _____ 12. Some money lending institutions calculate only *10 to 15%* of a spouse’s income when considering you for a mortgage. (Page 9)
-
- _____ 13. At the end of the loan, *the interest becomes the main part of the payment with the principal making up a smaller amount.* (Pages 16–17)
-

EXERCISE 3: Matching

For each word in **List A**, find the phrase in **List B** that best describes that word. Write the number of the word in the space provided.

List A**List B**

- | | | |
|-------------------------|-------|---|
| 1. amortization period | _____ | a. indicates legal ownership (Page 2) |
| 2. foreclosure | _____ | b. paying off a mortgage over a specific period of time (Page 1) |
| 3. mortgage | _____ | c. taking over a house to recover the amount loaned (Page 2) |
| 4. certificate of title | _____ | d. is necessary when a buyer does not have sufficient money for a down payment (Page 20) |
| 5. title search | _____ | e. the cost to you for the use of someone else's money (Page 1) |
| 6. interest | _____ | f. a pledge to repay the loan that has been given to you to help purchase a home (Page 1) |
| 7. down payment | _____ | g. the cash difference between the cost of a house and the amount of mortgage (Page 2) |
| 8. second mortgage | _____ | h. a check to see that the present owner holds the title clear and free (Page 11) |

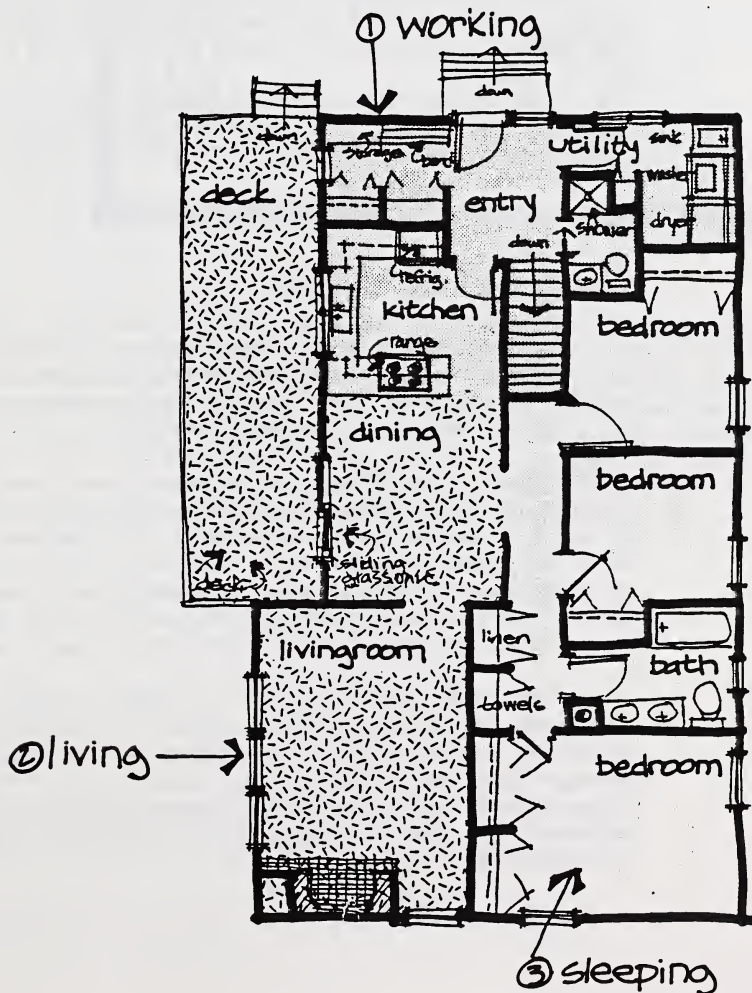
Complete <i>Exercises 3</i> and <i>4</i> in your Assignment Booklet for Module E: A Study of Housing, now.
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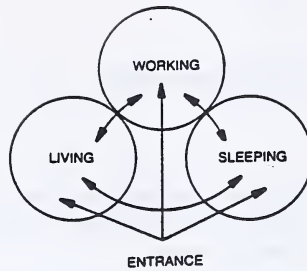
PLANNING LIVING SPACES**House Design**

You are about to spend a large sum of money on a house. It is important that you take time and spend enough energy to make it into a "home," that you and your family can live comfortably in and enjoy in the years to come.

The house plan should be arranged in three well defined basic areas or zones for activities and for people - living, working and sleeping. See Figure 1.

Figure 1





These areas should be separate from one another and you should be able to get from one area to another without passing through the third area. You should also be able to get to each area from the entrance without passing through another area.

Activity Areas

The working zone includes spaces for cooking, washing dishes, laundry, serving and hobbies, etc. Informal eating areas may also be included. This zone may be regarded as the noisiest area of the home, because of the operation of appliances and because of hard surfaces which produce more noise from walking, dropping items and setting things down. Aside from the noise, this area often produces a more cluttered look. The living zone includes spaces for family and guest group living, entertainment and recreation. People, noise and sounds associated with entertainment (television, stereo) are factors in this zone. The sleeping zone includes spaces for sleeping and dressing and personal hygiene spaces (bathrooms, showers, half-baths). This space must be separate for quiet and for privacy.

The zones should be well defined in a home. If a living zone is placed in between bedrooms, noise may be a problem. Essentially quiet areas (bedrooms) should be located over quiet areas, noisy areas over noisy areas.

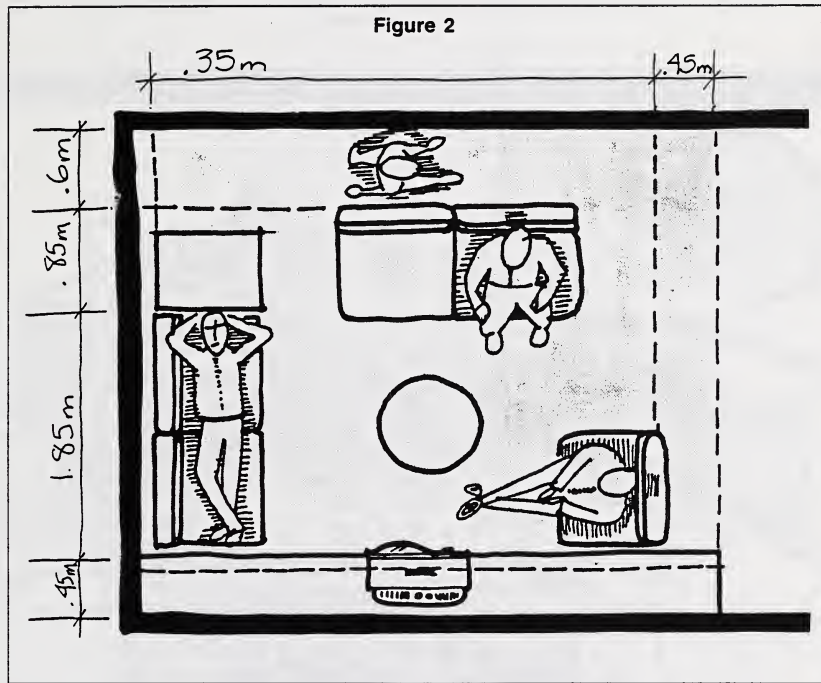
Living Zone

Living Areas Inside the Home

Living areas may be one large open space or be subdivided into smaller areas with each option suitable for a range of activities. Spacious, airy, open areas have to be planned carefully to segregate various activities. Dividers, furniture groupings, or changes of floor level are a few of the methods used to segregate activities.

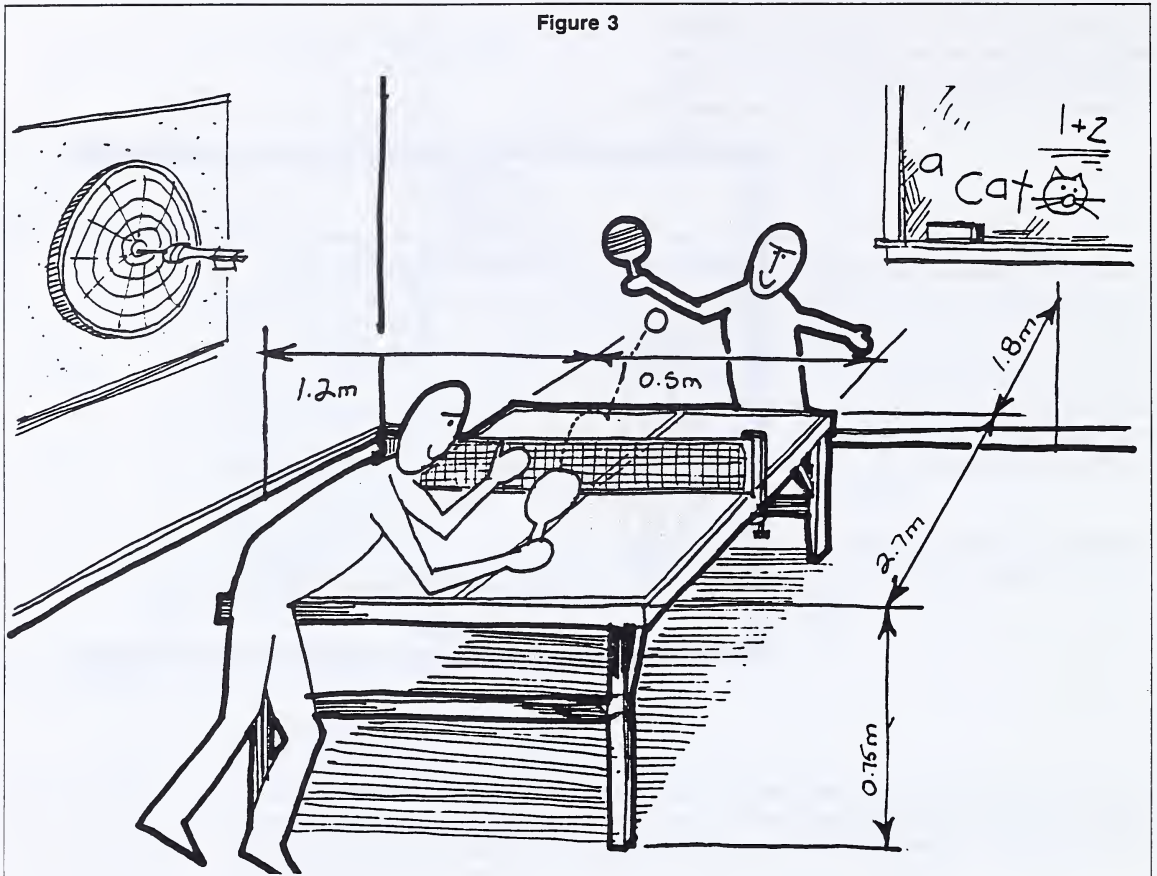
For homes where different age or activity groups must be accommodated, a greater measure of privacy and sound control would be gained by walls (separate rooms). The four categories of noise and movement include: quiet, sitting activities (reading, conversation, handicrafts, passive games like chess); noisy, sitting activities (like eating, watching television, listening to music); moderately noisy, mobile activities (like parties, passive games like card playing); and noisy, mobile activities (like children at play, dancing, physical games like ping-pong). Appropriate zoning for these activities may be necessary.

Group seating areas always exist in at least one living area of the home. Furniture arrangement and social response (willingness to visit and feel comfortable) directly affect one another. Obviously, this is a little understood concept because in many homes furniture is not grouped but rather placed in "ring-around-the-rosy" fashion around the room or single pieces of furniture are isolated from conversation groupings. The minimum dimensions for an area in which four or five people can sit comfortably to relax, talk, or watch television are shown in Figure 2.



Pool or ping-pong players have probably experienced tight quarters. For a pool table, 1.5 m (5 feet) of space all around the table is necessary to avoid poking sideliners in the eye. For ping-pong, 1.8 m (6 feet) of run-back beyond the table ends and 1.2 m (4 feet) on either side is required (Figure 3). It should be remembered that tournament tables for pool are normally not used in homes because of their size and weight. Folding ping-pong tables are smaller than tournament size tables as well. Check out the size of the table before planning the space. Not allowing adequate dimensions for conversation groupings and game tables are the two common shortcomings in planning living areas.

Figure 3



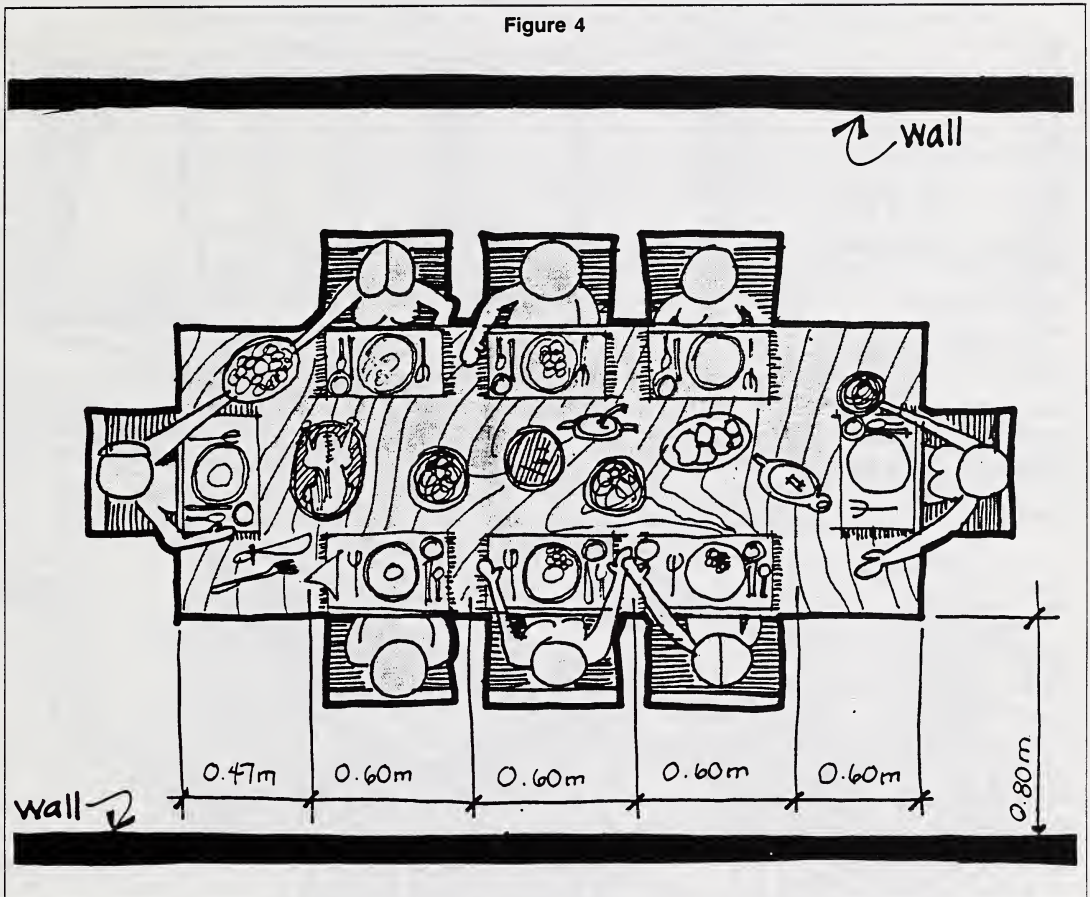
Dining Areas

Dining is one activity that brings the family together for a single purpose. Dining situations include family sitdown meals, holiday celebrations, formal meals, buffet meals, snacks, quick meals and outdoor meals.

Dining areas are used for relatively short periods of time in contrast to other areas so the space may be used for another activity (for example, a correspondence or telephone desk or a reading chair with book storage). The dimensions of dining areas should be adequate so the chairs do not hit the walls when moved back from the table and so that walking around the table for beverage service, collecting used dinner plates and serving desserts is possible. If extra dish storage (such as an addition of a hutch or china cabinet) is ever anticipated, the space should be preplanned so as not to reduce the general area for table and chairs. To select the table size, allow 0.6 m (2 feet) per person for side chairs and 0.73 m (2 feet, 5 inches) for armchairs. The distance from the table edge to a wall or barrier (china cabinet, railing) should be .80 m (2 feet, 8 inches). Figure 4 shows dining space requirements.

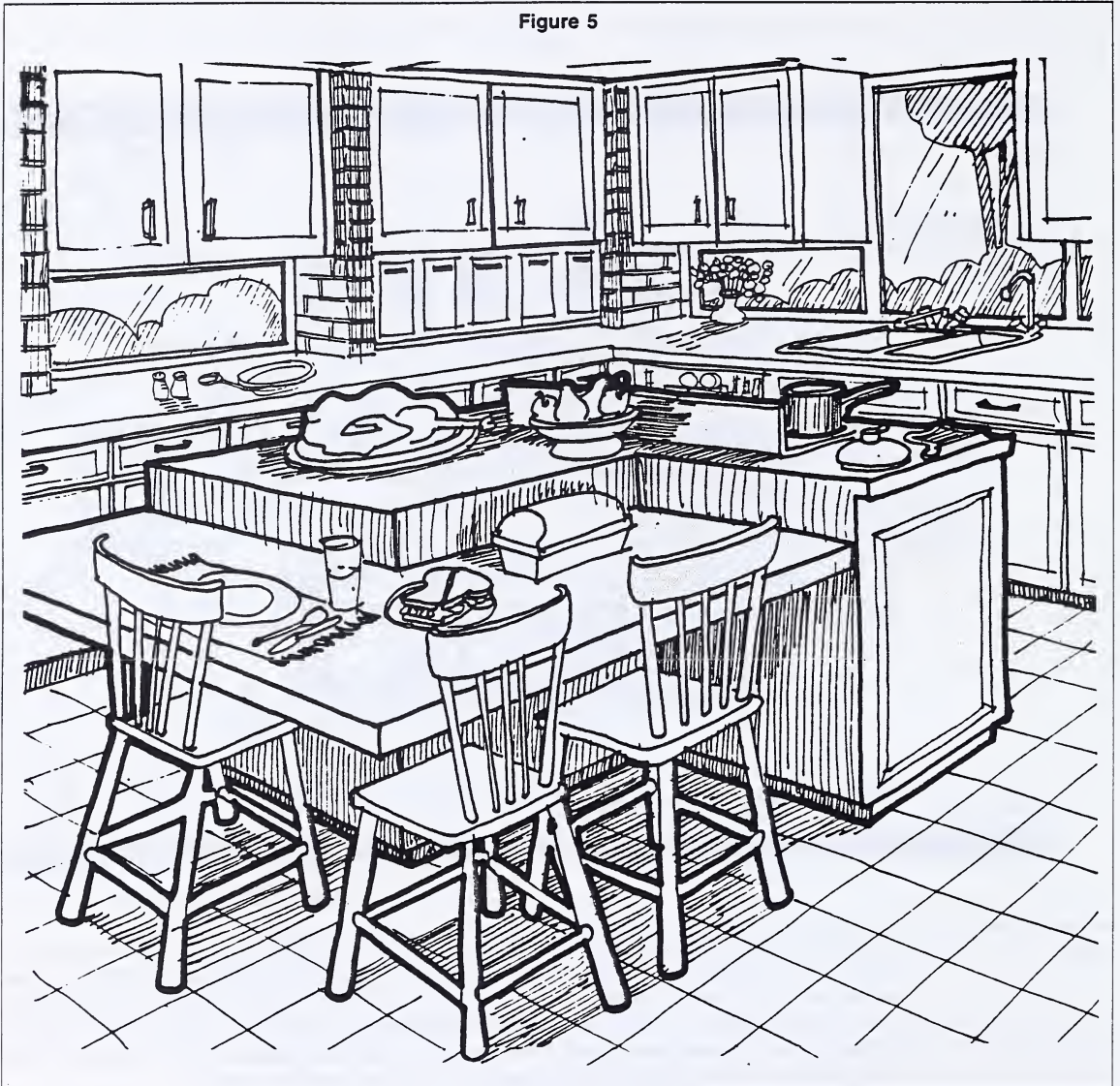
Important family events occur infrequently. Rather than planning a very large dining area, leave one side of the dining area open for possible expansion. Buffets are very popular and certainly cut down on the need to have large sit-down areas.

Figure 4



Assess whether two established eating areas such as a kitchen nook and a more formal dining area are required. Consider the amount of room needed for both areas. Will you use the second dining area enough to justify it? Does your lifestyle really require a more formal dining area? For snack or quick meal areas in or adjoining the kitchen, consider a more sociable counter or table arrangement (rather than a typical lunch counter). Figure 5 shows a unit incorporated in the kitchen which promotes a more sociable atmosphere.

Figure 5



Sleeping Zones

Bedrooms

In many homes a well designed bedroom may provide a quiet retreat at any time of day. They often provide the best conditions for concentrated reading, study, thinking, or even a catnap! A young child may find the bedroom a good place for individual play. Older children may use their bedroom as a room to visit with friends or as a hobby room. Bedrooms generally should be moderately sized so they can be multi-purpose.

The number of people who will occupy the room, and their ages will affect the design of the room. Aside from planning for the various roles the room will have to play, storage becomes an important factor as most personal belongings are stored in bedrooms.

The location of a bedroom may vary depending on the age of the child occupying it. Young children need to be near their parents at night. If the children's bedrooms are used for play, day supervision is easier if the bedroom is located near the kitchen. Older children may desire quiet and independence, and have their bedrooms placed away from parents. The lower level of the home may be developed for older children and satisfy this need for privacy.

It is more economical to utilize the space on the lower level for children's bedrooms than expanding the main floor. Attractive finishing materials, good day and artificial lighting and proper heating will help to create bedrooms on the lower level that anyone can enjoy.

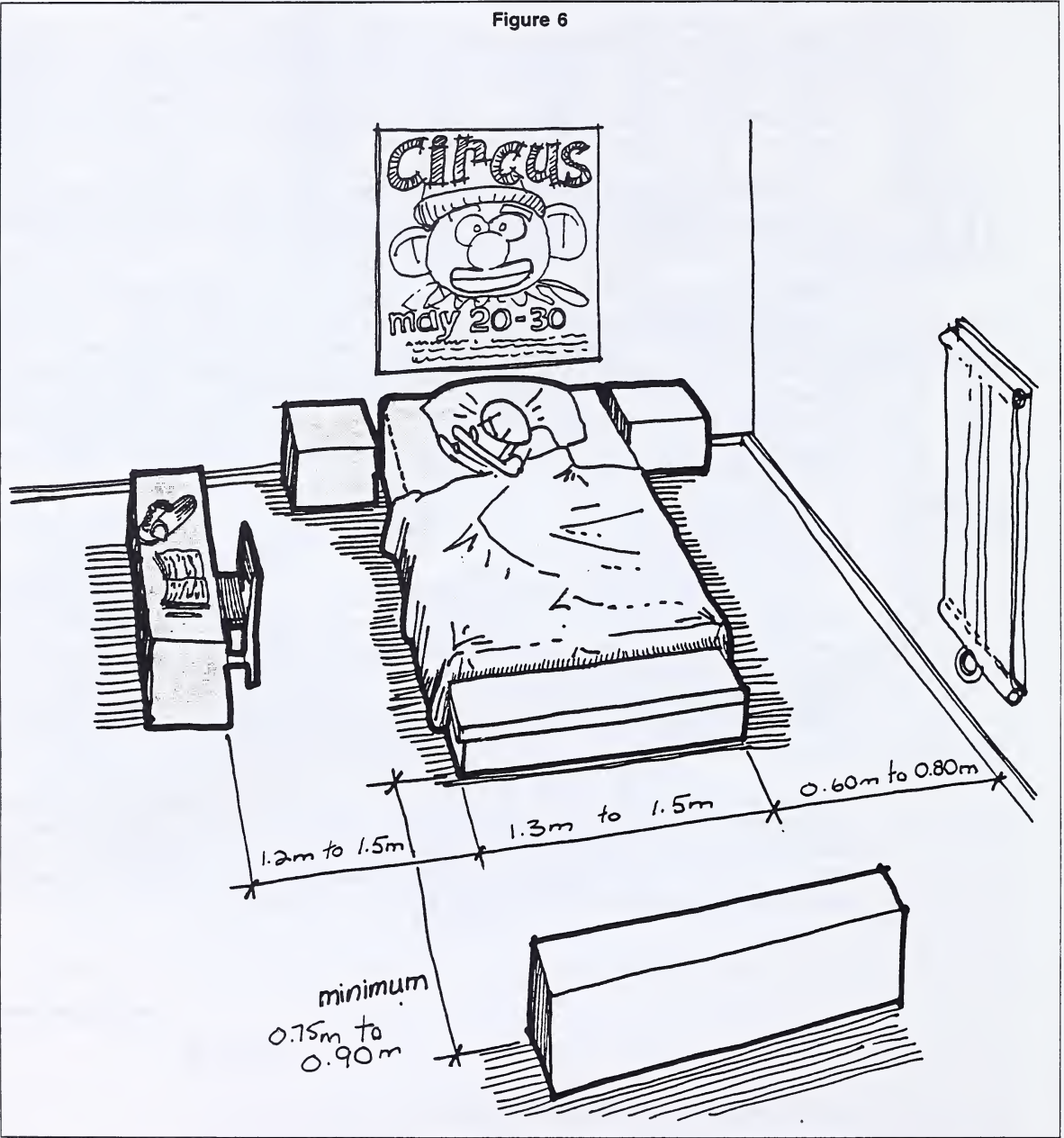
Beds are large pieces of furniture. Placing a bed or beds in a tight space may result in an insufficient dressing area, space for other activities or for furniture. This is one room where the use of scale furniture in the planning stage will be beneficial. If you prefer room on either side of the bed (for making it), check to see if there is ample space to bend (see Figure 6 on page 8). There are some good ways to conserve floor area in children's rooms with a selection of furnishings. A good example is a trundle bed (the lower bed rolls under a regular bed to leave floor area free in the day time). A study or storage area under a bed raised to a higher bunk level saves space as well.

Bathrooms

Bathrooms today are large with more elbow room and comfort appliances. Planning the bathroom is different from planning most other rooms in the home (except in the kitchen) because once the fixtures are installed they cannot be easily changed around. The number and age of individuals using bathrooms in a home will determine the number of bathrooms and their locations. In most homes, there is a main bathroom and a half-bath (usually located in the master bedroom). If there is lower and/or second floor development, additional facilities may be provided.

Bathrooms can be located in the interior or the perimeter of the house with the latter location permitting natural lighting and ventilation. The main bathroom should be readily accessible from the bedrooms. To accommodate family members more conveniently at "wash hours", a compartmentalized bathroom has the advantage of letting more than one person use the space at the same time. This concept is shown in Figure 7.

Figure 6



Avoid placing the tub near the window. It is drafty in the winter and it is difficult to reach over the tub to open the window. Another limitation is that the tub cannot be used as a shower. Figure 8 (on page 10) shows an arrangement that avoids this problem. The plumbing is on opposite walls, however, so it will be a bit more expensive for this arrangement, as opposed in placing all the fixtures on one wall.

In modest sized homes, half-baths off master bedrooms rarely seem necessary as long as a separate compartment main bathroom and a wash-up area at the entry is provided. When half-baths off master bedrooms are desired, they are occasionally integrated with a dressing area (Figure 9). In fact, bathrooms may be integrated with the bedroom. In some cases, the tub is placed right in the bedroom. The use of dividers, screens or partial walls can be used to separate the areas.

Figure 7

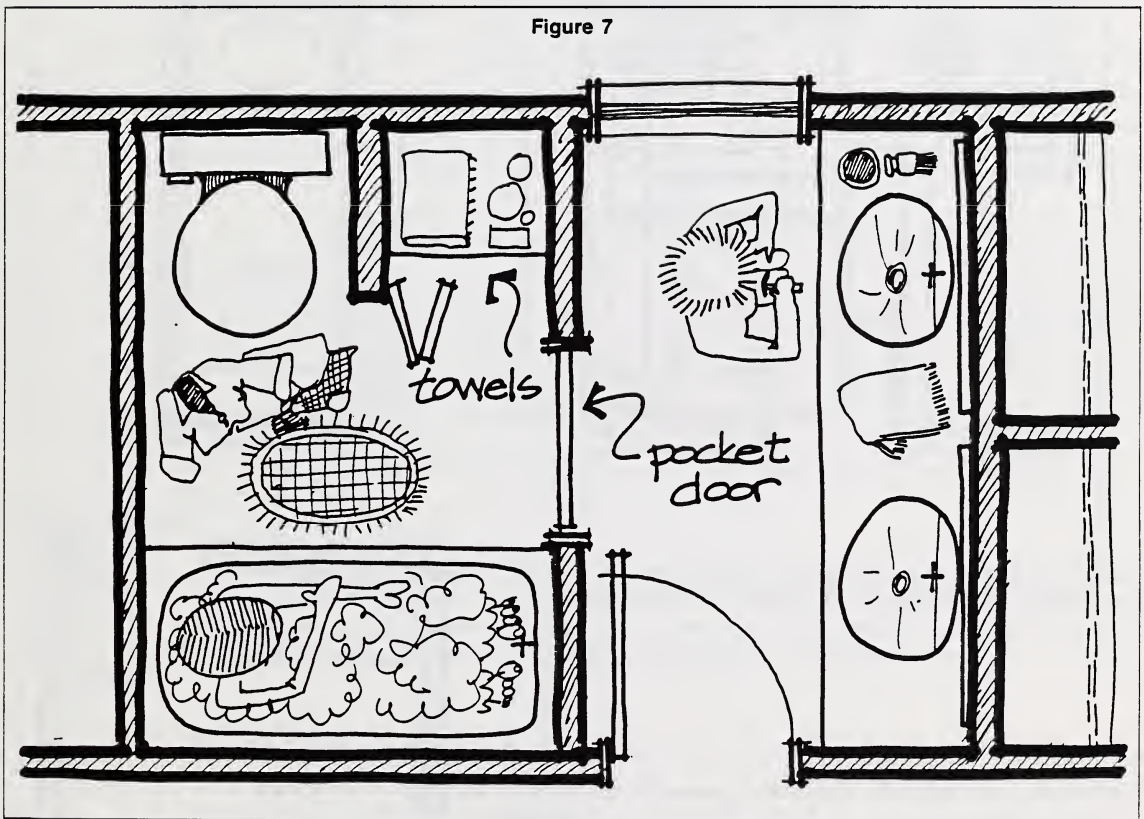
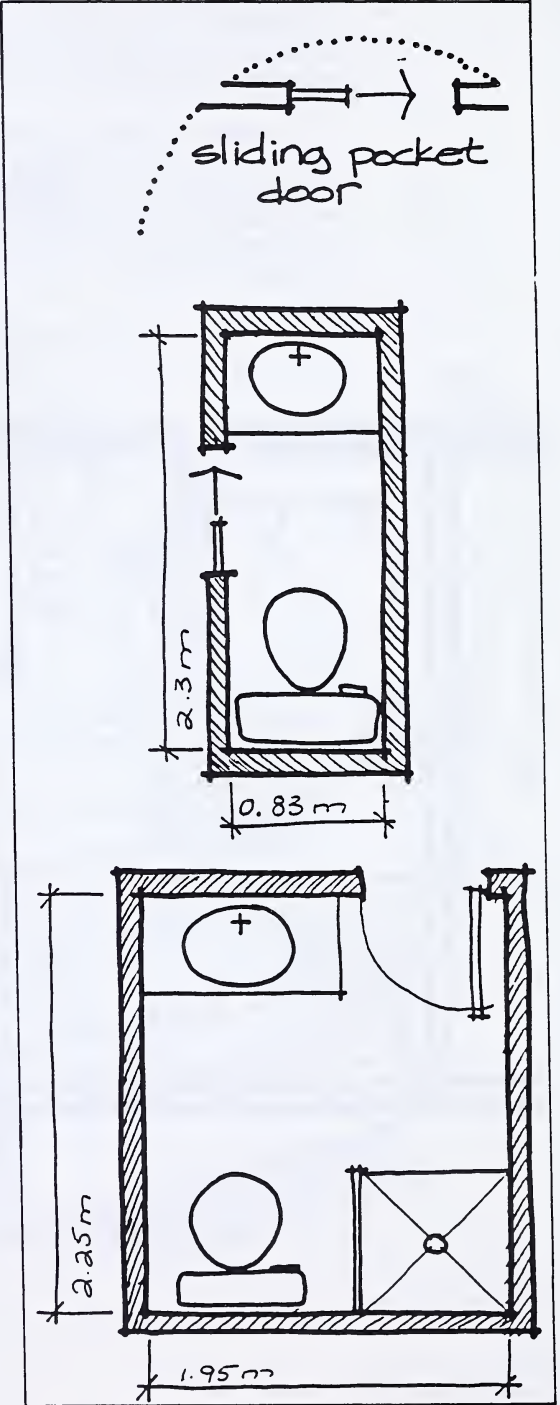
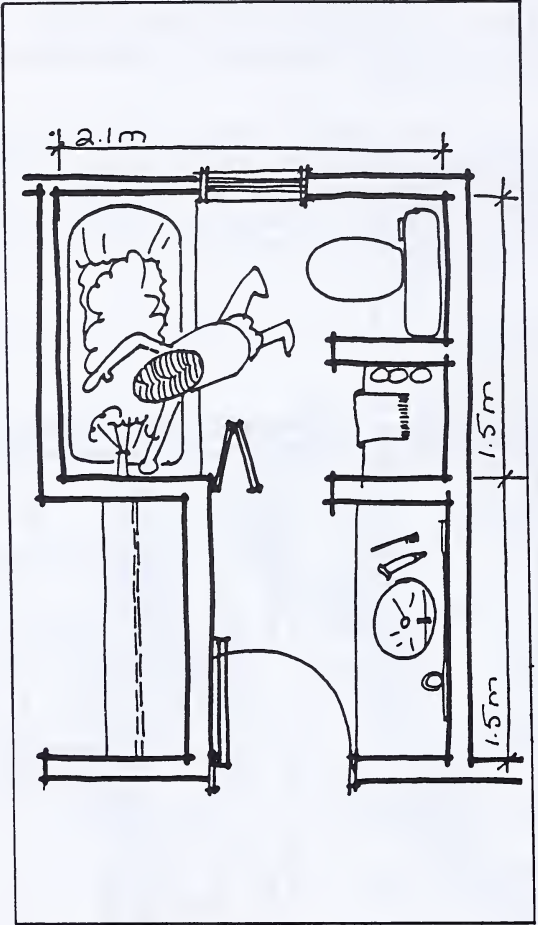
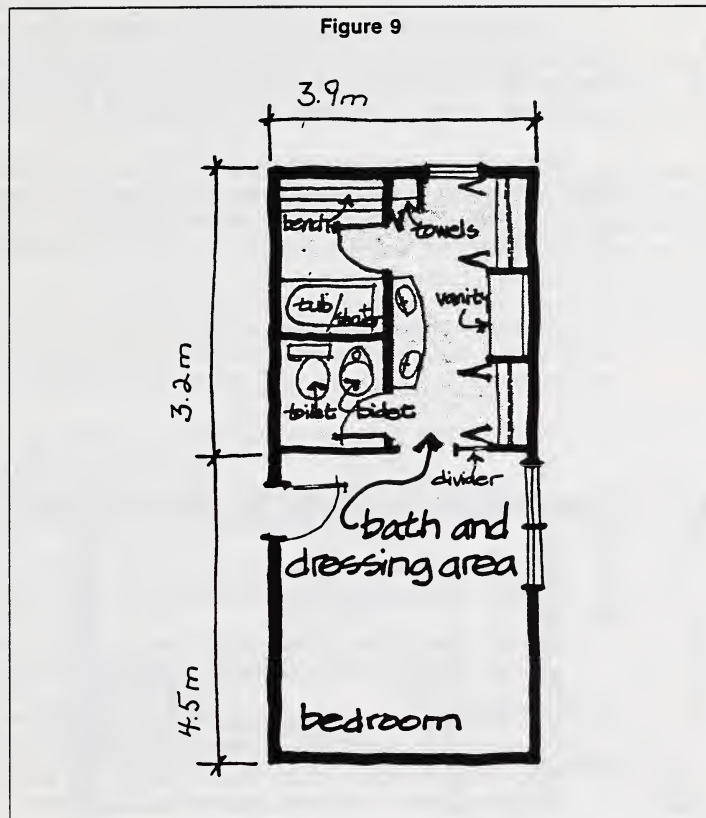


Figure 8





Working Zones

Work spaces are essential to the total functioning of the home. They include areas like the kitchen, the entryway and the utility room. It is desirable to play and develop these areas so they are as convenient and maintenance-free as possible. Since considerable time may be spent in a space (such as a kitchen), attractiveness is important as well.

Entryways

Function is the foremost consideration in planning an entryway. The location of the exterior must reflect convenience in terms of where play areas, the garden and parking areas are located in the yard. In the interior, the location must serve to begin and end a convenient traffic plan.

It must be remembered that in planning a main entry into the home, it should be made as a focal point of the exterior. It will create the first impression of your home. Not only should the door be used to create the focal point but also to create the general approach to the house. Walkways, landscaping and artificial lighting (for night purposes) can be used to complement the door.

Kitchens

The kitchen is one room in the house resistant to change and yet one of the most lived in areas during the day time. Since fixture placement becomes fixed after construction, it does not pay to cut corners in a kitchen design. Built-in cabinets and appliances with utility connections means the kitchen must be left much as it was originally designed.

Start with a well planned simple kitchen layout with all the basic services and equipment in the right place. In contracts, a complex kitchen (over-equipped with gadgetry which will never be used) will impede daily work in the kitchen. Many objects like food processors, slow cookers, toaster ovens, food dryers, etc., can be included in a kitchen but there are limitations.

Microwave ovens create a few problems in terms of locating them for convenience while not restricting other functions in the kitchen because of their size. Portable dishwashers created this problem a few years ago until spaces were modified for built-in types.

One of the first decisions to make about a kitchen is how you intend to use the space:

- Is the kitchen a family kitchen (one in which young children can play away from the basic work area while still being supervised)?
- Is the kitchen being planned for a retirement home (The size may be smaller and more consideration given to planning storage which is within easy reach.)?
- Is the kitchen used by more than one person at a time (if so, the kitchen should be wide enough to allow people to pass each other with ease)?
- Will eating space be combined with the kitchen (If you decide to use the kitchen only for breakfast, then a counter with stools may be adequate. However, if the majority of meals will be eaten in this general area, a more specific area should be allowed away from food preparation and cooking.)?
- Will the kitchen be used for food preservation or food preparation for a large number of people (Adequate work surface and storage would be very important.)?

Think about a kitchen designed for the life you and your family lead.

Kitchen Planning Principles

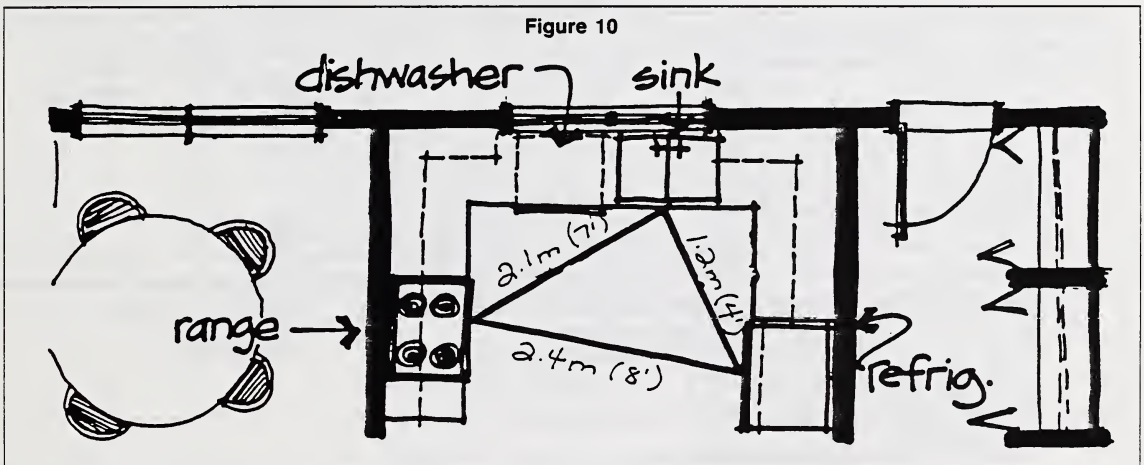
More studies have been carried out on kitchen design than on any other space in the home. Certain planning aspects have been established which help make the kitchen a more efficient place to work. Key objectives of kitchen design include:

- Storage space that is ample and logical (Ample means enough storage but not too much; logical means having enough storage spaces at the proper places.).
- Countertop space that is ample and in the right place.
- Well planned placement and areas for major appliances and related activities.
- Good natural and artificial lighting.

The major activity areas of the kitchen include the food preparation center (often referred to as the mixing center) which incorporates the refrigerator and related work area, the clean-up center incorporating the sink, dishwasher (and waste disposer) and the cooking and serving center including the range or range elements (and built-in oven). Other areas which may be included are an eating area, a planning center, a bar or a small hobby center.

It is the three major centers (the food preparation center, the cooking and serving center and the clean-up center) which should be arranged to form a work triangle (Figure 10). Total distance from the middle of the sink, to the middle of the refrigerator or the middle of the range elements should be from 3.6 m to 6.6 m (12 to 22 feet). The wall oven may be outside the work triangle as it is used least, although it can be planned close to the work triangle if possible. The maximum of 6.6 m is important because more space would waste steps, energy and time. Less than 3.6 m crowds appliances and activities and limits the space to a one-person kitchen.

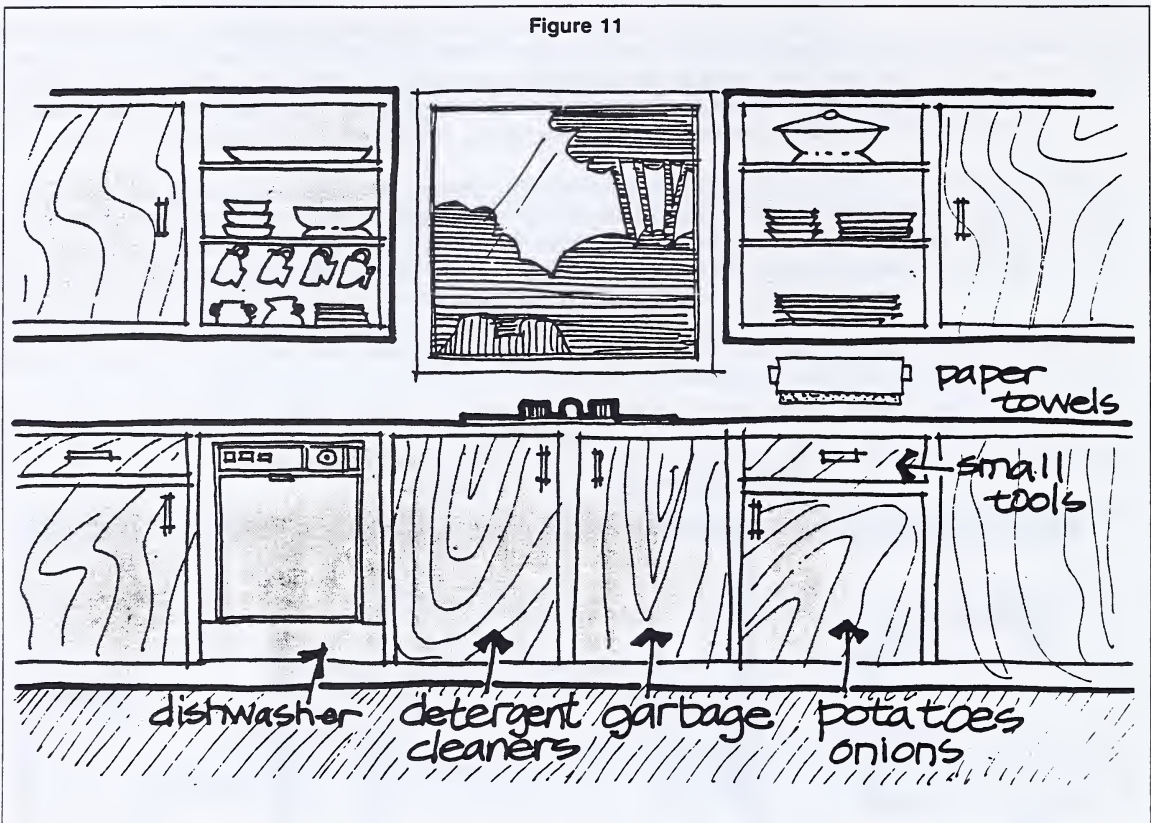
Figure 10



Kitchen planning begins with positioning the sink. Often it is placed under a window (but that is not essential). The refrigerator may be located to the right of the sink for a counter-clockwise (or right-handed kitchen) or to the left for clockwise action. Many sink related kitchen activities relate closely to both refrigerator and range so it is best to place the sink between the other two work centers. Since the oven is the most infrequently used appliance in the kitchen, it may be located outside the work triangle (if not included with the range elements).

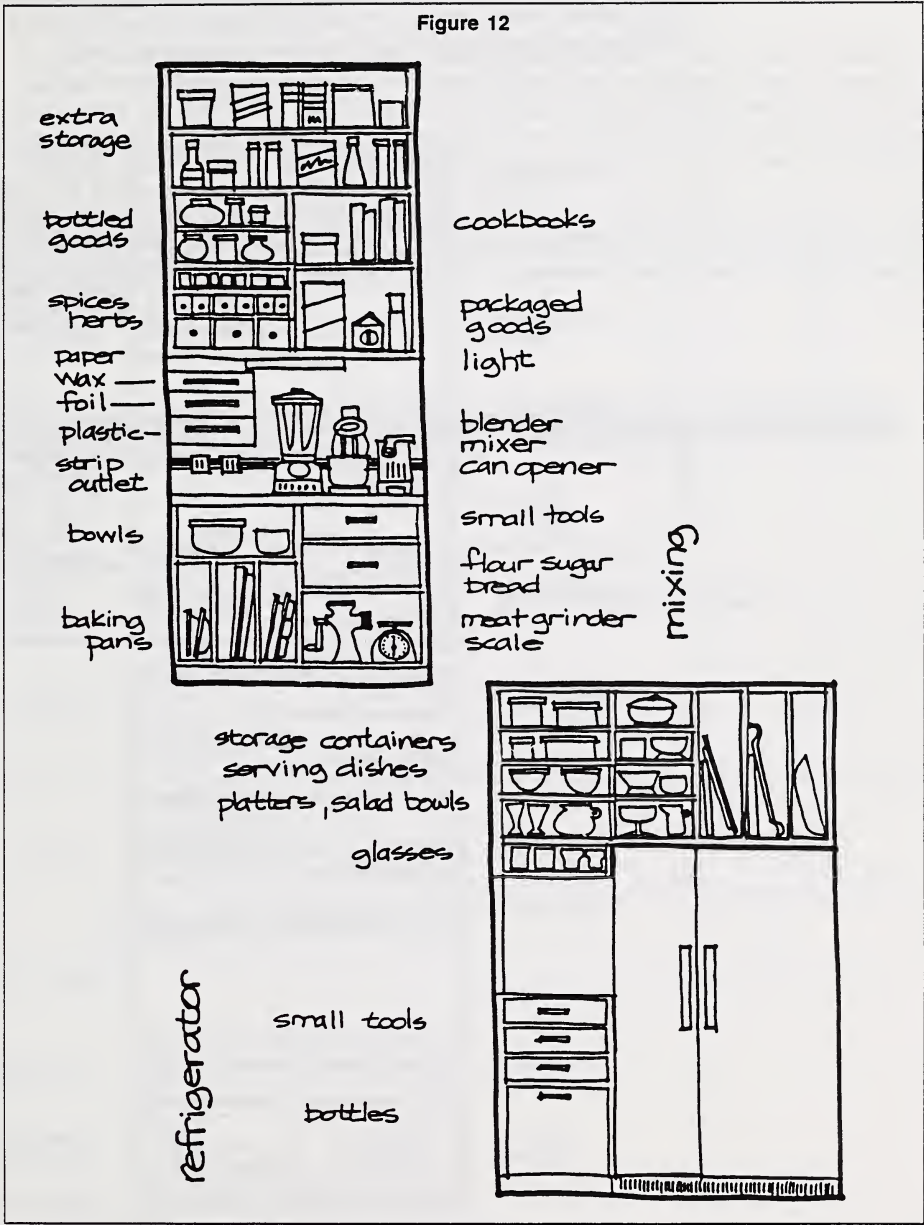
Because both the built-in wall oven and refrigerator are high appliances, they are often placed together. It should be remembered that they each need a counter as a "landing" space. Similarly, a side-by-side refrigerator-freezer should have counter space handy. If not possible on both sides, the priority should be given to a counter next to the refrigerator side door. The cook-serve center should be adjacent or very accessible to the eating area. In each of the activity areas, the space must be planned for various basic needs. The clean-up center (Figure 11) must provide storage for the sauce pans, coffee pots and food preparation supplies (vegetables that do not require refrigeration). Also included must be storage for cleaning supplies (dishtowels and dishcloths, soaps and detergents), provision for trash and garbage storage, space for tableware (although this may be in the serving center) and a cutting board adjacent to the sink (although one may be located in other work centers).

Figure 11



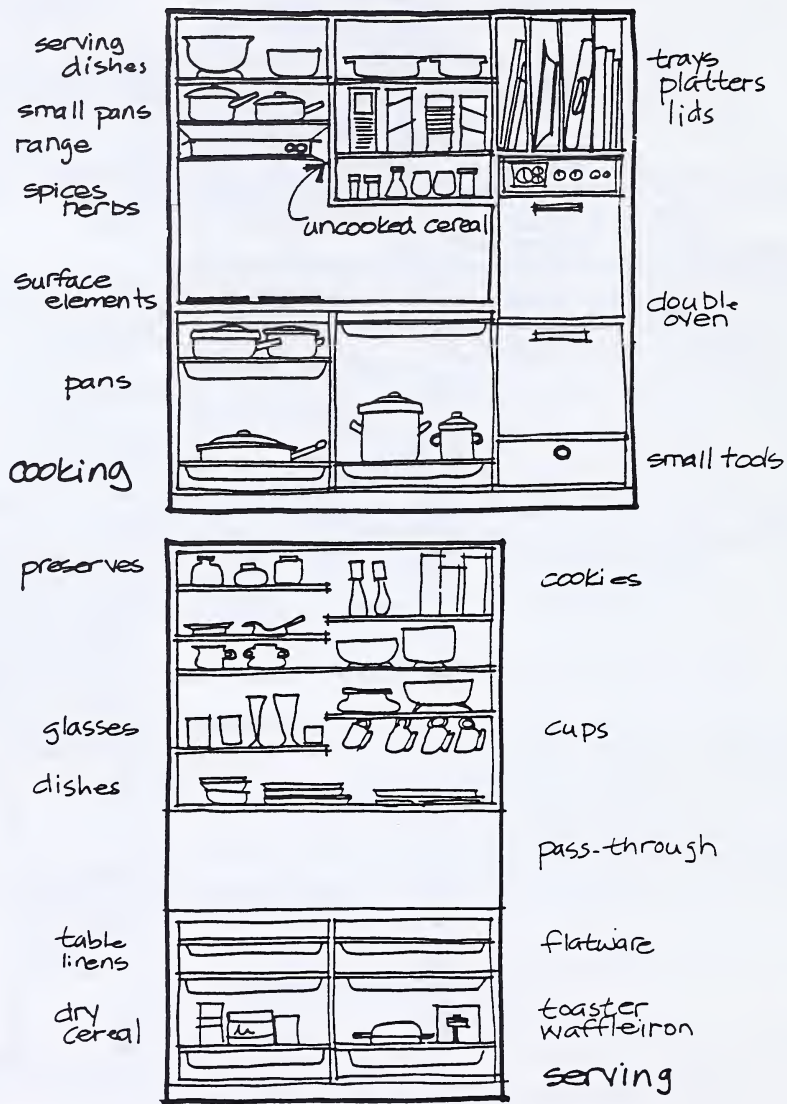
The food preparation center (Figure 12) should include storage space for containers that hold foods going into the refrigerator and for all items or supplies related to mixing breads and pastries, salads and casseroles, bag lunches, etc. (small appliances like mixers and blenders, condiments, packaged foods, small tools for mixing and cutting, pans and trays). There is often a requirement for specially designed storage spaces for flour, sugar and bread. As well, pantry units are popular, providing excellent storage for canned goods, mixing bowls etc. Tall, shallow units with adjustable shelving provide abundant storage that is very accessible, easy to see, flexible and easy to maintain.

Figure 12



The cooking and serving center (Figure 13) should provide storage for small cooking utensils and seasoning, areas for quick cooking appliances like a microwave oven, a broiler-oven, electric frypan, toaster, or waffle iron and storage for dishes and flatware, tablecloths, placemats and condiments (sugar or other ready-to-eat foods).

Figure 13

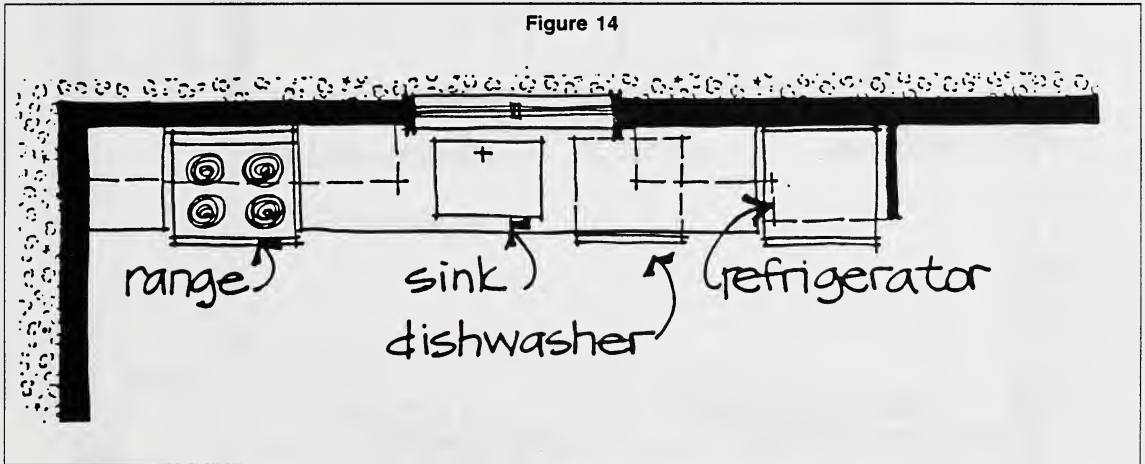


Kitchen Shapes

There are four basic kitchen shapes: one-wall (straight line), corridor (two-walled), L-shaped (which turns one corner) and U-shaped (which has two inside corners). These were discussed in detail in Lesson 4 of Module D. If a door or passageway interrupts any of these basic shapes, they are referred to as a broken-L or a broken-U. If an island or peninsula is used to achieve a work triangle, it might be called an island kitchen or a peninsula kitchen.

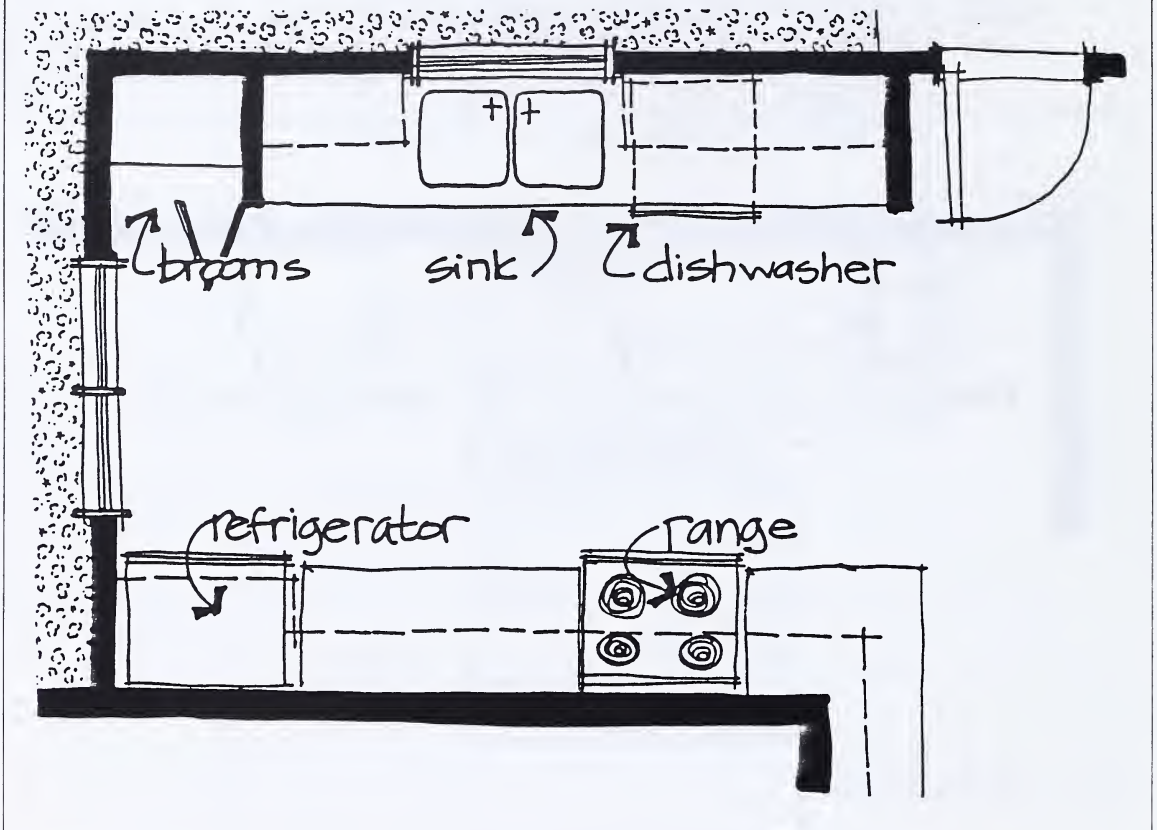
In a one-wall kitchen (Figure 14) limitations exist. Although this is an economical kind of kitchen and easily installed, no work triangle exists and storage and counter space are limited. These kitchens are used more commonly in vacation homes than in standard homes.

Figure 14



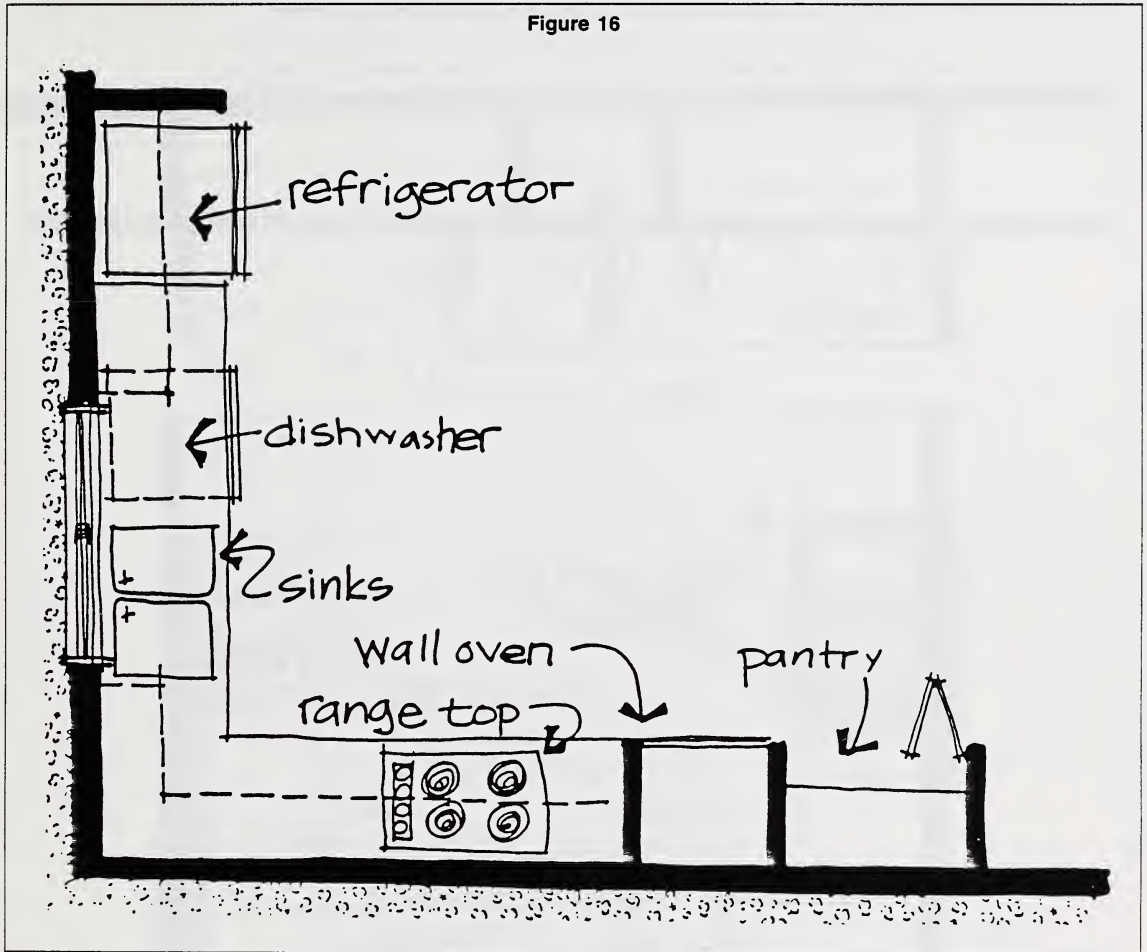
The corridor kitchen (Figure 15) adds an opposite wall, making an efficient work triangle with usable counter and storage space. One disadvantage with this kitchen shape is a potential problem with the traffic pattern through the kitchen. Alternate traffic routes or a dead-end corridor kitchen (with a window on the end wall) is most desirable if this kitchen shape is to be used.

Figure 15



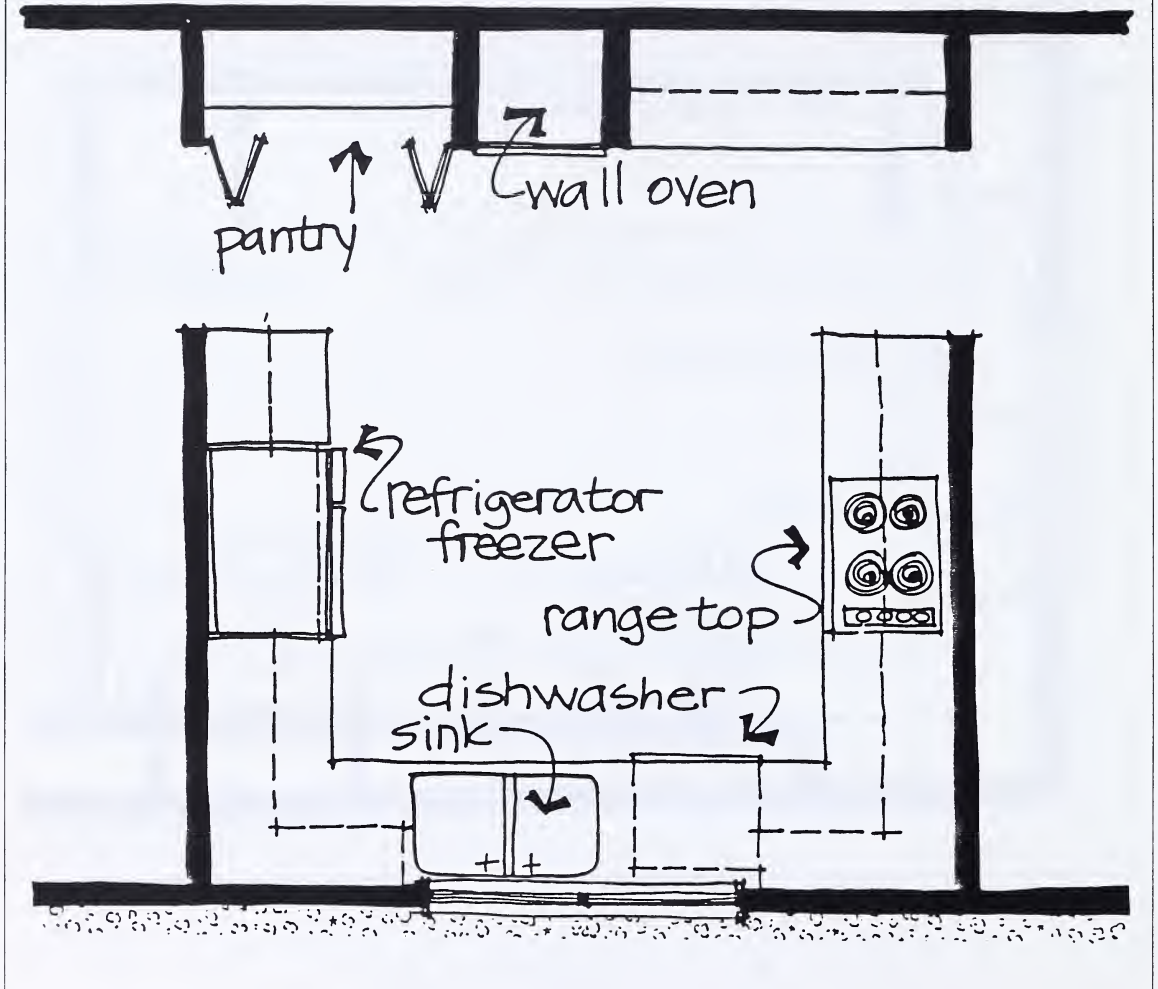
The L-shaped kitchen (Figure 16) is popular because a good work triangle is possible and through traffic is prevented. With the two sides of the L along long walls of a room, it is possible to plan a peninsula with a snack bar on one of the sides outside the kitchen.

Figure 16



The U-shaped kitchen (Figure 17) has three sides. A peninsula is common with this type but care should be exercised in avoiding a long peninsula with an adjacent dining area. A pass-through is a possibility to save some traffic around the peninsula but to use it effectively requires some organization at meal time.

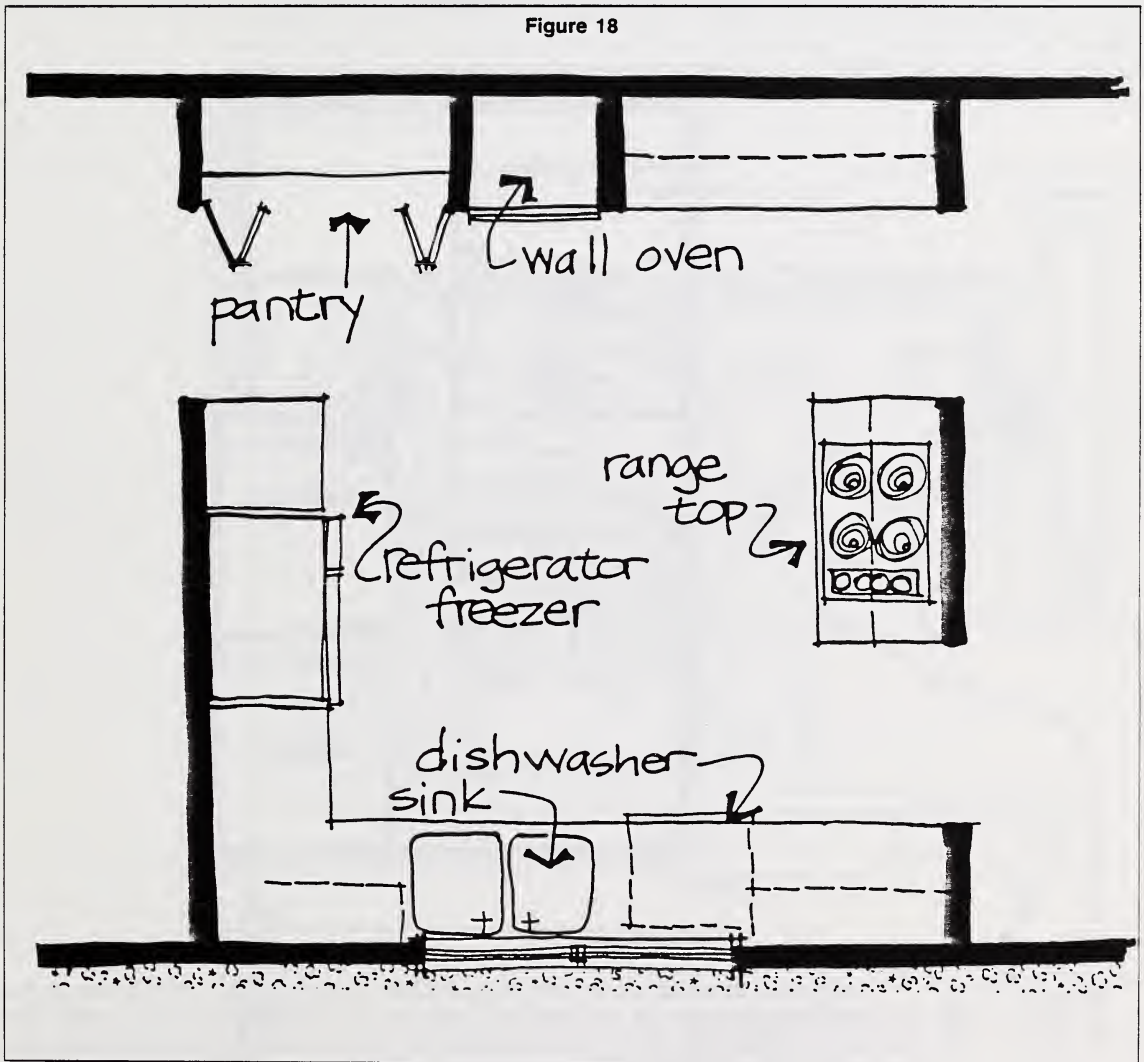
Figure 17



Consider breaking the U-shape, creating an island and having a more direct route to the dining area, as shown in Figure 18. A dining area may be placed at the end of the U instead of adjacent to the space as well.

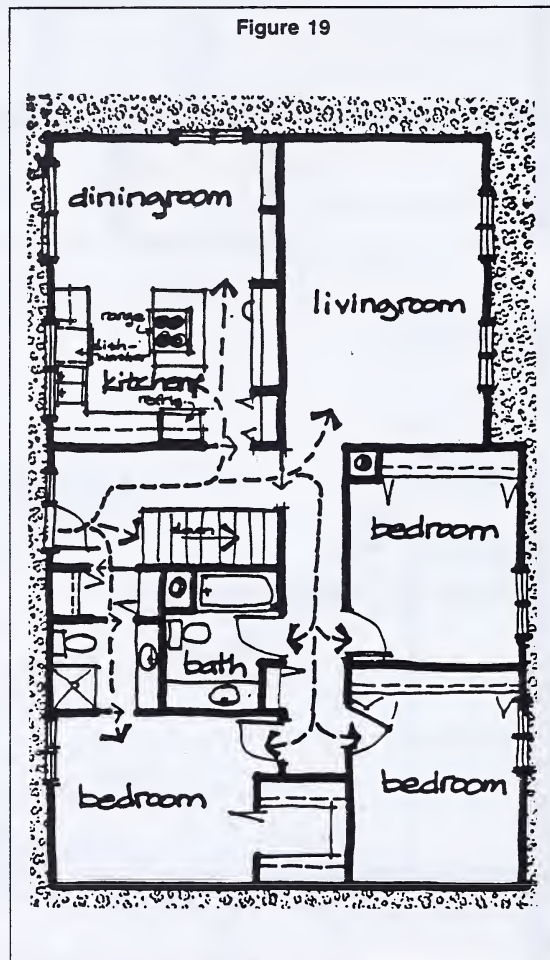
The U-shaped kitchen is very popular because of the continuous work surface. It is most desirable to allow at least 1.5 m (5 feet) clearance between the sides of the U. For a more generous two-person kitchen, 1.8 m or 2.1 m (6 feet or 7 feet) is a better width. Caution should be exercised not to get the sides of the U too far apart or convenience will be reduced.

Figure 18



Traffic Patterns

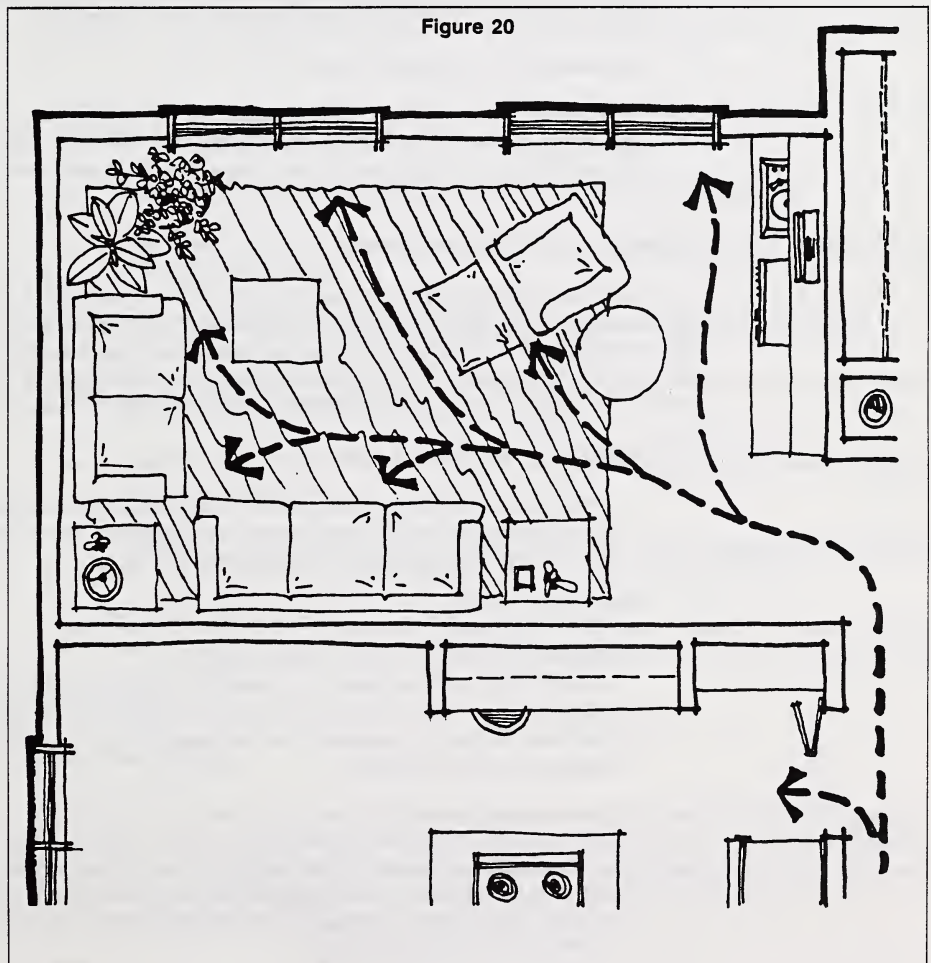
The traffic flow throughout the home and through individual rooms should be direct, convenient and logical. It should serve the purpose of “people paths” but not be wasteful of space. Short routes from point to point in a home will actually simplify housekeeping and make the use of the house more pleasant. Achieving good traffic patterns throughout the home (Figure 19) starts with some sound basic planning. If an entry to a home is fairly central, traffic can normally be channelled to all areas of the house with ease.



Easy access from the service entry to the kitchen is important for carrying in groceries, for checking on the comings and goings of youngster, etc. The service entry should be close and direct to a wash-up area as well. If a single main entry is planned for family and guests, the traffic pattern to the living area should be as direct as possible avoiding passage through other rooms like the kitchen. Hallways are needed to maintain privacy and quiet for the sleeping zone but the lengths should be kept as minimal as possible to save space.

All major traffic lanes should be planned to avoid going through any room to reach another. Understood hallways are those which may not be defined by walls on each side but are those which are required to pass group living or working areas. Frequently, the hallway is capitalized on to increase the sense of space or for a dining room table extension, or the occasional large gathering, etc.

Achieving good traffic patterns within a room (Figure 20) also begins with some sound basic planning. Care has to be taken to make sure traffic does not travel from corner to corner through a room as it may destroy the activities within the room as well as the furniture grouping. For example, traffic through an inside living area to an outside area deck should not cut through a furniture grouping. Traffic in defined spaces should be direct to the furnishings or storage used the most in daily activities. For example, in a bedroom, the clothes closet and drawers would be used more frequently in daily activities than the bed. In the living room, the stereo/tape deck may be used frequently. The traffic path to the most used unit should be the most convenient and direct.



Storage Areas in the Home

Every family's storage needs are individual; review your own needs, then check off the articles you must store and be certain there is a place in your house for everything you want to store.

Principles of Storage

Location and arrangement are criteria on which storage should be judged. Location is considered in relation to the items to be stored and the place where they are most frequently used. Arrangement is judged on how well the space will accept the items to be stored in the area.

1. Location of Storage Space

Small equipment and supplies are more convenient if they are stored near the place where they are used. More frequently used articles should be easily seen and reached and equipment for one activity should be stored together.

2. Arrangement of Storage Space

How well the storage units themselves accommodate the articles to be stored determines efficiency. Adjustable shelving allows a person to fit the shelves to the articles. Special fittings, such as lid racks, take care of specific items thereby increasing efficiency.

Storage in the Service Area

In the areas where most of the work is done, storage areas must be especially well planned. For example, the kitchen area needs a lot of storage for all the items involved in the preparation and serving of food. These items include perishable and nonperishable foods, measuring cups, place mats, dishes and a variety of other things. The laundry area is also included here as well as an area for storing tools and equipment to keep the house in good repair.

1. Basement Recreation Room

- storage for card tables and folding chairs, ghettoblasters, television, stereo and compact discs (or tapes), musical instruments, toys, projector and screen, magazines, books, a variety of small games and miscellaneous items.

2. Basement Laundry

- separated from areas where children play
- washer, dryer, sorting table, cupboards to store detergents and other supplies
- place to store clean, unironed clothes and soiled clothes and linen
- Basement storage is possible if the basement is dry, has sufficient light and is well ventilated with safe stairs.

3. Out-of-Season Storage

- sports equipment, electric fans, luggage, wheel toys, out-of-season clothing
- Seasonal storage space is needed for trunks, suitcases, Christmas tree decorations, bicycles, skis, skates, toboggan, camping and picnic equipment, outdoor furniture, screens, storm windows, etc.

4. Tool Storage

- workbench with pegboard or panel of wood arranged for tools not suitable for drawer or shelf storage
- small garden tools, shovels, rakes, hoses

Kitchen Storage

If you are living in an apartment or ready-built house, you have little choice in the amount or location of storage units. Adding shelves or accessories can increase the capacity of your storage space. Some storage ideas include: divided utensil drawers, deep vented drawers, adjustable shelves, pullout shelves or trays, pullout platform for mixmaster or blender, countertop appliance cupboards, portable appliance cupboards, divided cupboards (vertically divided for trays, cookie sheets, paper bags, etc.), Lazy Susans, pantry cupboards, step shelves, food-wrap shelves, towel racks, paper towel dispensers, turntables and utility closets. Other storage ideas are: sliding pot hooks, peg board liner, double-hinged doors, under-cabinet shelves and swing-out shelves.

Kitchen area storage does not necessarily have to be in the kitchen but it should be close at hand near the kitchen for:

- a. **Food surplus**—canned goods, jellies, jams, fruit, root vegetables.
- b. **Seasonal**—(large equipment) pressure cooker, canning kettles, canning jars, rubbers, caps, crocks.
- c. **Waste**—garbage, re-cyclable bottles, newspapers, magazines, paperbags
- d. **Dining**—silver, dishes, table linen, special dishes, large bowls, platters, decorative dishes, stemmed goblets
- e. **Laundry**—soap powders, clothespins, laundry basket, soiled clothes hamper, ironing board, iron
- f. **Cleaning**—closet for brooms, mops, pail, dust cloths, cleaning and polishing solutions, vacuum cleaners and attachments, dust pan and brush
- g. **Toy Storage**—may be a large basket, toy box, closet, chest or shelves located near where the child plays. If space is provided, the child may be taught to put things away.

Living Area Storage

This area includes rooms used for group and personal activities. Storage for each area and activity is unique. The group activity area includes space for guests, for family-centered activities, for family hobbies and for recreation. Personal activities include reading, studying, writing, sleeping, grooming, dressing, sick care and personal hobbies.

The Closets

The closets should:

- be located where most convenient
be designed for their use (for example, linen closet should have enough large shelves)
- At the main entrance, a clothes closet is required for street clothes, umbrellas, rubbers, raincoats.
- At the service entrance, a clothes closet is required for children's clothes, rubbers, snowsuits, overshoes. Closet space should be provided for outdoor toys.
- have a mirror to check appearance, if possible

The guest closet is

- where coats, hats, purses, boots are left while guests are visiting. It is in or near the front entry.

1. Storage for Family-centered Activities

- storage space for records, tapes, games, writing supplies and anything else that the family likes to do
- In the living room you need storage space for books, radio, writing equipment, records, musical instruments, sheet music, games, current newspapers and magazines, ashtrays.

2. Clothes Storage

- advantageous to put all the articles used for dressing in one well-organized area in the room of each person
- needs a minimum of one meter of rod space
- should also have space to store shoes, hats, purses, belts and ties

3. Bathroom Storage

- convenient to store towels, soap, toilet tissue and cleaning supplies in bathroom
- provision for storing medicines and dangerous cleaning products
- Storage space is also needed for hot water bottles, clothes hamper and wastebasket.

4. Bedding Storage

- Hall closet near bedrooms is useful for bedding.
- helpful if shelves are adjustable for bulky blankets and extra pillows

5. Sleeping area storage

- In the bedrooms, you need clothes closets for summer and winter clothes, hobby or special articles, books and radio.
- In the children's bedrooms, the clothes closets should be made with movable hooks and shelves arranged in heights according to the child's age for hobby storage, sports equipment, toys and books.

Families that have experienced limited storage in a home will probably be quite aware that this is an important requirement in their new home. The kind of storage that each household needs depends on the family's interests. Some families need storage for books, sports equipment, coins or other hobbies, games, puzzles, and ... this list could go on and on! There are types of storage which every home will need like cleaning supplies and equipment, medical (and veterinary) supplies, linen goods, clothes and coat closets, seasonal clothes storage and kitchen foods and cooking items.

List the types of storage required in your home. Then check out the plan to see if it will accommodate everything in convenient locations. Be flexible in thinking about storage. Consider an active storage wall with built-in shelving and drawers for books, a stereo sound system and accessories set at right angles to a wall to act as a space divider as well. Perhaps special hanging racks would accommodate a collection of bulky sports equipment. Instead of an extra spacious kitchen, possibly a floor-to-ceiling pantry area with adjustable shelving would store four times more goods (more conveniently too). Remember also that a large variety of items in a home may go into inactive storage (a cardboard box in the basement storage room, etc.).

Figure 21 shows a plan where only limited storage is available while Figure 22 demonstrates this same plan, slightly larger, with storage planned for every space. A storage wall between the kitchen-dining area with some open shelves would make the rooms appear more spacious. The storage wall in the living room is accommodated by the wall which turns back into the room (looking neat and well planned). Considerable storage is allowed at the entry for coats and boots, school books, lunch boxes, or other special needs. Good storage locations (and the development of specific rooms) are vital to the functioning of a home.

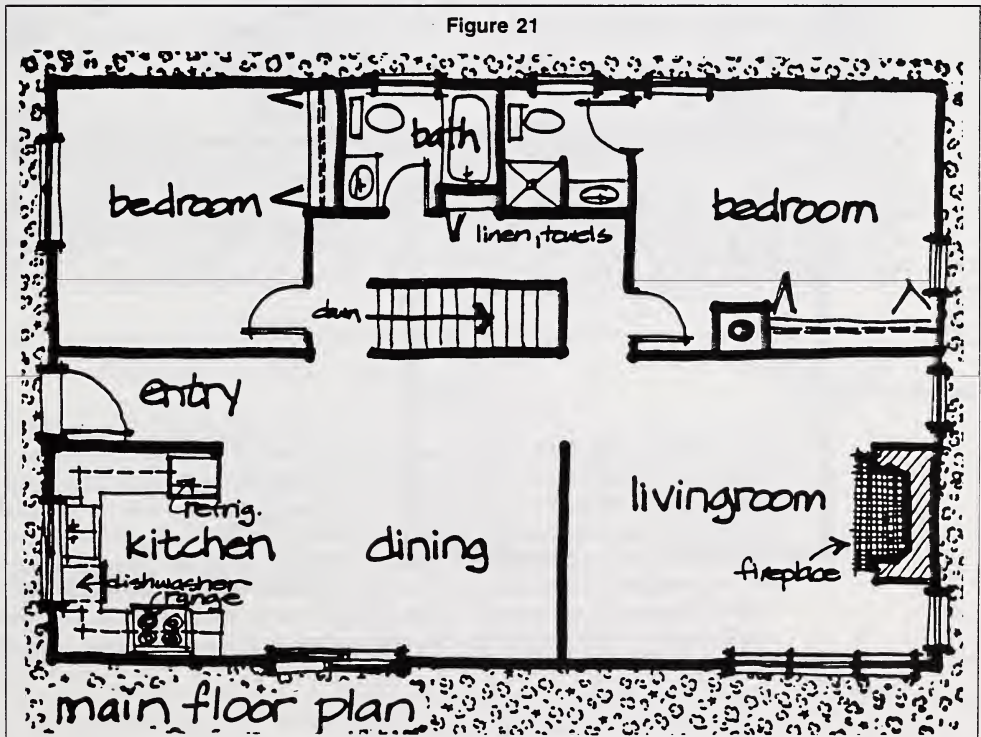
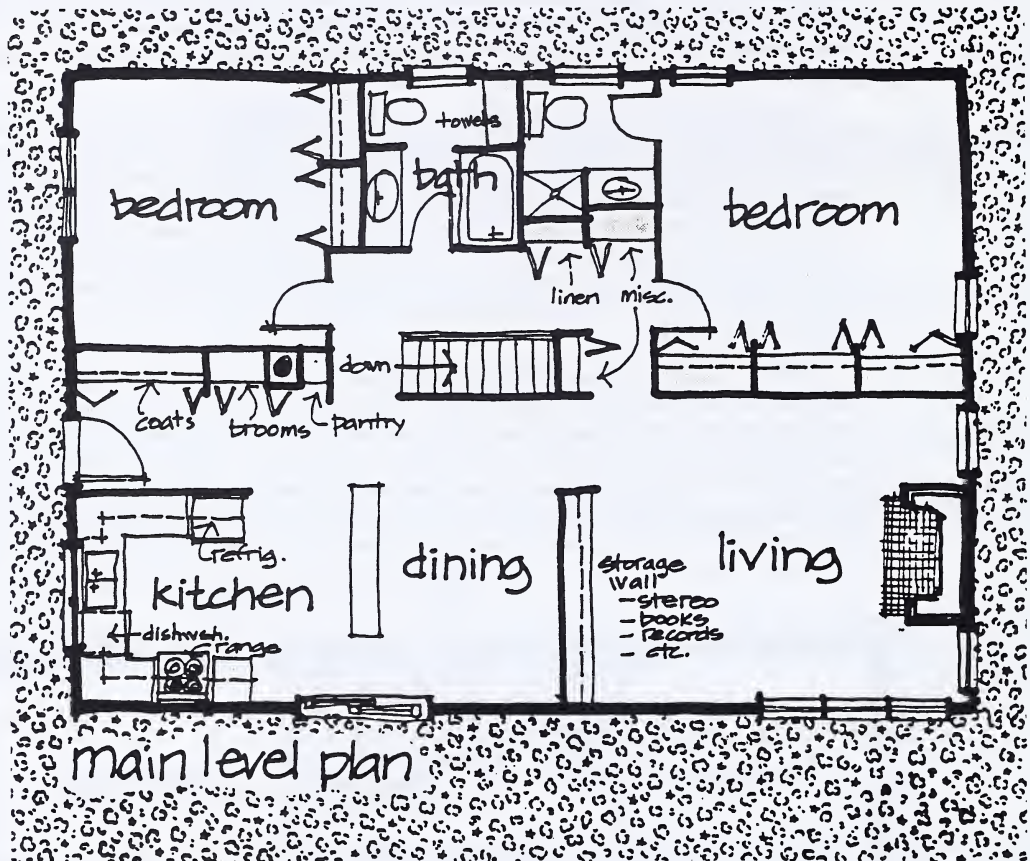


Figure 22

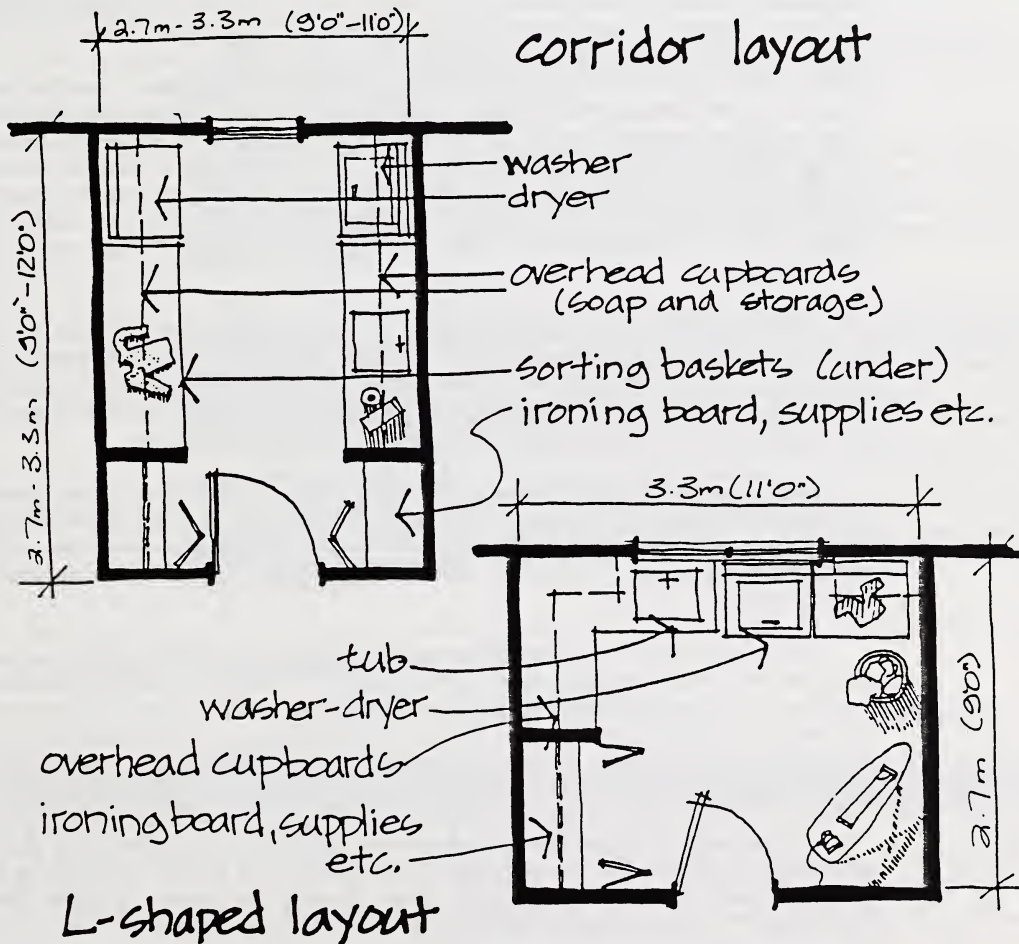


Laundry Rooms

Laundry room planning will be affected by the size and age distribution of the household and the size of the home. The basic laundry activities to allow for include receiving, sorting, preparing, washing, drying, finishing or ironing. In some homes a minimal laundry space is allowed — primarily space for the washer and dryer. However, the complete laundry process requires a room sized larger than just a closet. For example, laundry tubs or deep sinks can be very valuable for soaking or clean-up. In multi-level homes, a laundry chute can often be incorporated to save steps. Figure 23 shows two examples of laundry room layouts. For convenience of use, minimum distances between appliances should be maintained.

Noise is a factor with laundry equipment. So, some segregation from the living area is worthwhile. Most soiled laundry comes from the bedroom area but the noise factor as well as selecting an area convenient to the service entry and kitchen makes positioning the laundry near the bedrooms difficult. Sewing centers are frequently combined in utility rooms. If extensive sewing is done in contrast to mending tasks, it is necessary to allow for the sewing machine, chair, cutting surface, storage for fabrics, remnants, notions, tools, steam iron and ironing board. There are optional kinds of equipment, but a whole room for this task may be preferable to a sharing arrangement with laundry facilities.

Figure 23



Home Safety

Fire is a great danger to personal safety. Even more threatening than fire, however, are household accidents. A safe and secure home requires protection against these hazards — fires and home accidents.

Installing a fire alarm system in a home generally involves the use of smoke and heat detectors. Although a centralized system can be installed during house construction, self-contained units may adapt more readily (especially in a renovation situation). Heat detectors are made of metal parts that close when heated to sound an alarm. They may be a fixed-temperature type or rate-of-temperature rise type. Both require heat to set them off, so are best located in areas such as furnace rooms where a sudden temperature increase could occur without an open fire. Smoke detectors are devices capable of detecting fire in very early stages — before smoke or toxic gases have accumulated to lethal amounts. The two basic types available are photo-electric and ionization. Ionization devices contain a small radioactive source in a smoke chamber which detects a current change if smoke particles enter the chamber. They operate on batteries or on the 120 volt household current supply. Photo-electric devices operate on 120 volts only and detect particles in the air by a reflected light beam. Both ionization and photo-electric devices work equally well. Units requiring 120 volts to power them must be placed near a supply line or outlet and are subject to failure if the power supply is cut. Battery powered units are more reliable but do require placement of the power supply periodically.

The best location for a single detector is between the living and sleeping areas of the home. For a two-storey residence (one in which the lower level is actively used), at least two detectors are a must. They should be located at the head of the stairs and again between living and sleeping areas. It must always be remembered that smoke and heat detectors do not prevent fires. Do not use them to develop a false sense of security.

Design your home with exits that can be readily used in case of fire — doors, windows, or ladders (from second level spaces). Plan and practise the use of escape routes. Small fire extinguishers should be strategically available in your home in areas where fires are likely to start (kitchen, furnace room, etc.). Choose fire-resistant fabrics and fire-retardant paint when possible.

Accidental injuries occur more often in the home than anywhere else. Most household accidents are of the roller-skate-on-the-stairs variety — avoidable by using common sense. Accidents can occur, however, despite good design and common caution. Bathrooms and stairways, which are responsible for most injuries in the home, are dangerous even if they are built correctly and used with care. But there are things you can do to make these two parts of the house safer.

In bathrooms, the major cause of accidents is a slippery tub or shower stall. Textured grip strips, usually sold in pre-cut lengths, can be stuck to the bottom of the tub or to the floor of a shower stall to help reduce this danger. Even with grip strips, however, you can slip and fall. To lessen that risk, install grab bars to provide handholds.

Stairways are the most dangerous part of a house, surpassing even bathrooms as the site of accidents. Some stairs have trouble built into them. They can be too steep. Tall or uneven risers invite climbers to trip on tread nosings. Shallow treads make stairs difficult to descend without catching a heel on a riser or slipping over a nosing. Stairways with these deficiencies cannot be made safe; the stairs should be replaced.

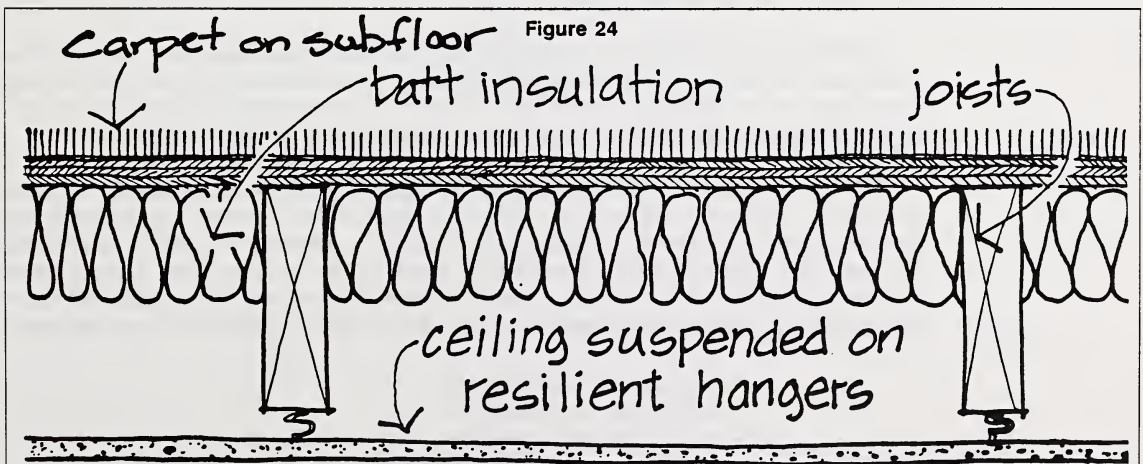
The most slippery stairs are those with a natural finish. If you insist on the beauty of bare wood, use nonskid wax on your stairs. It is safer to cover them up with something less slippery. If you choose carpeting, use a low-pile variety — it is less likely to catch a heel or to make a tread seem wider than it is — but unless you are skilled in laying carpets, have the job done professionally. Carpeting that is poorly installed is more hazardous than no carpeting at all. On basement or attic stairs, where the luxury of carpet may be inappropriate, tack rubber safety treads to the wooden ones, apply heavy-duty grip strips to treads or coat the treads with paint that contains sand or pumice. Use gates to keep small children away from stairs and never position a small throw rug at the head of a stair.

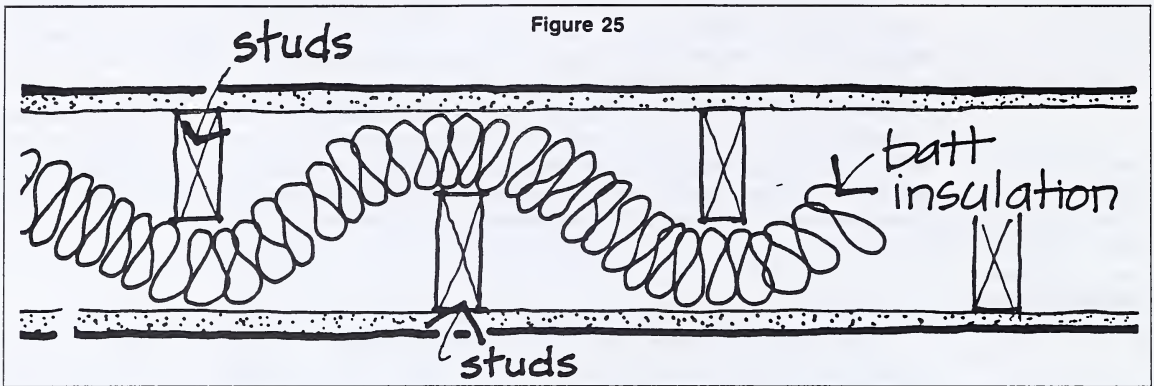
Soundproofing

Noise sources are external and internal. External noises are from traffic, industry, crowds and ground vibrations. Internal sources include speech, home appliances, plumbing, heating systems and entertainment equipment.

External noise control in residences should be planned from the start. Homes should be placed to avoid traffic noise and, if possible, not face sources of noise. Little used areas should be placed as buffers between sources of noise and quieter spaces. Vestibules and hallways are examples of areas that can act as buffers between external sources and the living quarters of a home.

The two methods of controlling interior noise are insulation against the sound passing through the structure and absorption of sound within the structure. Insulation against sound passage can be provided by mass or isolation. Massive walls (using concrete or lead in construction) are expensive and not practical in most residential construction. Isolation can be provided with a staggered stud construction as shown in Figure 25, or the suspended ceiling construction shown in Figure 24. The two surfaces are isolated from each other to control impact noise and by placing an absorptive material (like batt insulation) between the surfaces, airborne noises are also controlled. All cracks in partitions have to be sealed as well, since sound will flow through any opening. Back-to-back electrical outlets and through-wall mechanical ducts have to be avoided in partitions. Doors can be weatherstripped to control noise transmission.





The design of the plan can do much to control noise. Zoning, as mentioned before, places quiet areas together. Closets between rooms increases sound absorption. Hallways and vestibules can be located to isolate noisy and quiet areas.

Increasing the absorption of sound in a space (and thereby decreasing the sound level that escapes) involves stopping surface reflection. Absorptive materials act like a sponge with the best materials owing their efficiency to a high porosity and thickness. Carpets work well on the floor, especially with felt underlay. Interlined draperies work well over windows and materials like carpet, cork, or soft sculptures and tapestries can be used on wall areas to cut down the amount of reflection. Acoustic plaster or tile will provide an absorptive ceiling surface. Large pieces of upholstered furniture also function well in rooms to absorb substantial amounts of sound.

Each room that requires noise control has to be treated individually. Rooms that generate a lot of noise require treatment in them. In the furnace room, for example, absorptive walls and ceilings should be used. Equipment should be placed on absorptive, resilient pads and care should be taken in sealing around pipes and ducts going through wall or ceiling surfaces (using acoustical caulking). As well, the door should be of a heavy material with weatherstripping applied all around.

Bathrooms generate less noise if the walls are insulated, some absorptive wall or ceiling treatments are used, and extra insulation is placed around and under tubs and showers. Any large motor driven appliances, like washers, dryers, dishwashers and refrigerators can also be placed on resilient, absorptive pads to isolate them from the floor surface.

In summary, plan your house layout so that noise sources are as distant as possible from quiet areas. Utilize existing walls to confine noises and install heavier, well-sealed doors. Rearrange ducts and electrical fixtures if required to cut down on the number of openings between rooms. Sound absorptive materials can be used to reduce noise levels in rooms where the sound originates. Choose plumbing and mechanical equipment which are quiet and mount them on resilient pads. As well, choose floor and counter materials which have some resiliency.

Self-Study Exercises**EXERCISE 1: Multiple Choice**

Select the best possible answer and place the appropriate letter in the space to the left of each question.

- _____ 1. This room in a home provides conditions for concentrated studying, reading, thinking and even a catnap. (Page 6)
- (a) dining room
 - (b) bedroom
 - (c) kitchen
 - (d) family room
- _____ 2. This type of kitchen is popular because of the continuous work surface. (Page 21)
- (a) U-shape
 - (b) corridor
 - (c) peninsular
 - (d) one-wall
- _____ 3. A homemaker working in a work triangle measuring more than 6.6 m (Page 13)
- (a) wastes steps.
 - (b) wastes energy.
 - (c) wastes time.
 - (d) all of the above.
- _____ 4. This kitchen shape has the problem of traffic passing through the work triangle. (Page 18)
- (a) L-shaped
 - (b) one-wall
 - (c) corridor
 - (d) U-shaped
- _____ 5. The distance around a work triangle should be between (Page 13)
- (a) 1.9 to 2.5 m.
 - (b) 2.6 to 3.6 m.
 - (c) 1.5 to 4.3 m.
 - (d) 3.6 to 6.6 m.
- _____ 6. A single smoke detector should be placed between (Page 30)
- (a) the living and sleeping areas.
 - (b) the kitchen and dining area.
 - (c) the living room and family room.
 - (d) the family room and kitchen.

EXERCISE 2: True and False

Carefully read each statement below and decide if it is true or false. If the statement is true, place a **T** on the short blank before the statement. If it is false, place and **F** on the short blank. Correct all false statements by changing only the *highlighted* portion.

- _____ 1. *Bathrooms* are the most dangerous part of the house. (Page 30)

- _____ 2. *Zoning* is one method of controlling noise in a home through the design of a house plan. (Page 32)

- _____ 3. A main bathroom should be readily accessible from the *kitchen*. (Page 7)

- _____ 4. A *work triangle of less than 3.6 m* crowds activities and appliances and limits the space to a one-person kitchen. (Page 13)

- _____ 5. A refrigerator needs *a counter as a landing space*. (Page 13)

- _____ 6. In a laundry room it is most convenient to have the *distances between the appliances to a minimum*. (Page 28)

- _____ 7. Smoke and heat detectors *help prevent fires*. (Page 30)

- _____ 8. The *living room* should be a quiet zone in relation to the overall household traffic patterns. (Page 2)

- _____ 9. Two mistakes often made in planning living areas are *not allowing adequate space for conversation groupings and game tables*. (Page 3)

- _____ 10. Well defined zones in a home have the *quiet areas located over quiet areas and noisy areas located over noisy areas*. (Page 2)

- _____ 11. Traffic patterns from corner to corner through a room *destroy the activities and the furniture grouping.* (Page 23)
- _____ 12. In planning a house closets should *not be placed in an entrance hall as they take up too much space.* (Page 26)
- _____ 13. Well designed storage areas are placed conveniently near where the articles should be used *to save steps, promote safety and avoid confusion.* (Page 24)
- _____ 14. Accidental injuries occur *more often in the work place than anywhere else.* (Page 30)

Complete <i>Exercises 5</i> and <i>6</i> in your Assignment Booklet for Module E: A Study of Housing, now.
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FUTURE HOME DESIGNS AND CAREERS IN HOUSING

Future Home Design

One wonders what the future holds in terms of housing. Will the homes our grandparents live in look primitive? Can we imagine electronic efficiency taking over in our home — no cooking, no cleaning and no washing? Perhaps dishes, clothing and cooking utensils will be disposable and electronically replaced in the home. All of this is possible.

Automation in the Home

With technology advancing as quickly as it is, many devices and features presently used by industry will make their way into the home. Computers can simplify household management. Perhaps home computers will become as common as the telephone.

Through magnetic tape and programming devices, the following are possible: information storage centers, centralized study centers, improved safety devices and perhaps even a robot housemaid are possible.

Automated Storage Center

There are many record-keeping tasks performed in the home today. As a result, the family information that has to be processed (insurance policies, mortgage and loan records, bankbooks, tax returns, etc.) can be made easier through the computers. All the information can be programmed into a computer and can be used by any family member when needed. Computers are capable of keeping financial records up-to-the-minute. They are able to keep track of checking and banking records, entering interest as it accumulates and deducting charges as they arise. An up-to-date financial report can be given at any time. A computer system is able to maintain an inventory of food staples and warn the homemaker when supplies need to be replenished. It is also capable of reminding families when important events like anniversaries and birthdays are occurring. Shopping can be simplified by recording into the computer the sizes of preferences of individual family members in relation to styles and colors.

Learning Centers

It is possible that through the use of computers, education may become more home centered. There will come a time when there will be electronic connections with classrooms, libraries and stored cultural films that the student can use without going to the library or being in school. A keyboard unit will make classroom work practical in the home. Students from across the country may be enrolled in the same electronic classroom. With the rapid accumulation of knowledge, up-dated information can be readily available to the students on short notice.

Safety Devices

All exits and entrance areas in a home can be monitored by a television. The resident can be notified immediately of any danger where there is a break in the electronic circuit. It may be possible some day to have a TV “dial-a-sitter” where TV cameras in the home will make it possible for a homemaker to watch how her children are being cared for in her absence.

Robot Housemaids

A British scientist, M.W. Thring, developed an experimental "robot housemaid." Daily recurring tasks like cleaning up, doing dishes and making beds can be programmed into a simple robot device.

The robot housemaid can do the routine tasks on schedule and in the absence of the homemaker. The homemaker who views household tasks as drudgery will find the robot housemaid a luxury. Homemakers could be free to pursue more creative and personally or economically rewarding tasks. This robot may have the run of the house, walk up and down the stairs, clean itself, store itself and recharge its batteries without any complaining. It would be programmed with instructions like "Don't step on the infant" or "Be careful with the furniture and don't bump into it."

New Technology, Products and Materials

New materials with finishes and surfaces resistant to scratches, soil, dirt and dust are continually being developed for the home. Many articles being developed for the home will be of the disposable type, thus eliminating numerous laundry maintenance problems. Humans will use many scientific principles to save time, energy and money in the home.

House styles are constantly changing. For example, homes can be built with moveable partitions and detachable rooms to accommodate families at different stages of their family life cycles. There will be windows that close automatically when it rains. Cleaning equipment like floor polishers, vacuum cleaners and floor scrubbers will be self-operating. Possibly, dishes will be washed in minutes and clothes will be cleaned quickly in closets wired with supersonic sound. Food will be prepared in seconds with microwaves.

Influences of Technology

Technology is improving our standard of living and shortening our work day and work week. As a result, people can take longer vacations and are being faced with the burden of using their leisure time to their best advantage. They will be spending more time at home, which will become the place for personal enrichment. The increased leisure can mean a second home away from the hustle and bustle of urban and suburban areas. Skills in home management and homemaking will become very important.

Housing of the Future

Much of Canada's housing problems are related to space. In comparison to total Canadian land use, little land is actually lived on, yet housing space is difficult to find. Also, it is expensive. To solve this problem, many new sources of living space are being investigated.

Millennium City

Herman J. Fraunhofer, an Austrian, designed the Millennium City, a new concept of future city life. In his design, he uses the concept of cluster housing to provide the best use of space. Clustering creates high-density housing and the saved land is used for parks, gardens, etc. It is a flexible type of housing where units can be added or removed as needed. Through this flexibility, houses can be built in stages or they can easily be remodelled.

Fraunhoffer is interested in accommodating all people with their housing needs, particularly the children and the elderly. Let us now look closely into his new concept of city design.

In his city, Fraunhoffer has the buildings shaped like rings. Each ring housed about 100 000 people. The diameter of each ring is about 1.6 kilometers (1 mile) and is 122 meters (400 feet) high. The housing units contained within each ring range in size from 27 to 198 square meters (300 to 2200 square feet). Concrete, steel and glass are used in these structures which are expected to last a long time.

Included in each ring are schools, shops and churches which, along with community services, are located on the bottom levels of the rings. Inside the rings are open areas for features like the golf course, zoos and lakes.

Fraunhoffer designed the power to be produced within each ring. Gases from recycled human wastes can be used by the transit system. Trapped solar energy is used to heat and cool the buildings. All other resources are used wisely and pollution is controlled.

Housing in Outer Space

Dr. Gerard O'Neill, a well-known physicist, believes that soon many people will be living in space. One possibility is that a huge self-contained space capsule could house 10 000 people. These people would live in small communities. The capsule would have its own animals, streams, fields and grasses. Climate, use of resources and pollution could be controlled.

Besides housing its residents, space may be able to supply energy to use on Earth through the use of satellite power stations. Then energy would be available at low prices and we would never have to worry about an energy shortage.

Housing Under Ground

The idea of underground housing is gaining in popularity. A man from Fresno, California believed that living space could be extended downward. Many of his years were spent digging tunnels and rooms underground. He built his home there. One of the rooms in his house very much resembled the size of an auditorium. Many people doubted his sanity as he dug away. After the man died, his excavations were turned into a tourist attraction. Now, however, some house planners are seriously considering the idea. They are foreseeing entire underground communities; however, no one, as of yet, has built a whole community underground. The closest we have come to building underground is the underground parking lots and shopping malls.

Paolo Soleri built an "earth house" in Scottsdale, Arizona. You can walk on the roof without knowing you are on top of a home. It is only when you approach the entrance that you realize the presence of an underground dwelling.

Soleri was a student of Frank Lloyd Wright who said, "No house should ever be on a hill or on anything. It should be of the hill, belonging to it, so the hill and house can live together, each the happier for the other." It is obvious that Soleri followed his teacher's idea (the dwelling and the hill seem to belong together) in the "earth home" he built.

Housing On and Under the Water

Living space can be found on and in bodies of water. The SS United States was once the world's fastest ocean liner. Now it has been converted to a seagoing condominium. It has 282 housing units all of which are highly priced. However, less costly seagoing homes are available. Houseboats are becoming popular as a second home and they can also be utilized year-round. Houseboats certainly are a thought for the future to lessen the storage of housing space.

Also, there is the idea of building homes above water. In this case, the home appears as though it is standing on stilts. This type of house design uses space above water very effectively.

Jacques-Yves Cousteau, an ocean explorer, predicts that some people will be living in cities under water — perhaps even on the ocean floor. These cities may resemble the housing capsules designed for outer space.

It may be that these housing predictions may not pan out and may just be science fiction. However, it is interesting to think about what form and direction housing in the future will take. Do you have any ideas? Do you foresee any of these housing plans occurring during your lifetime?

Material and Methods for Housing

In Richmond, Virginia, there is a four bedroom house that looks like all its surrounding homes. However, it is different in that it is made from recycled materials. Following is a chart of some of the materials used and where they were obtained.

MATERIALS USED	PLACE MATERIALS WERE OBTAINED
The brick, concrete blocks and driveway pavement and floor tile were made from glass bottles found in the parks. These bottles were crushed into rock-like pieces.	California
Termite-proof materials were produced from the aluminum beverage cans picked up along the beaches. These materials were used to frame houses.	Florida
The driveway surface was a mixture of melted, discarded auto tires and crushed glass.	Mississippi
The formula for the pavement was developed by the Environmental Research Department of the University of Missouri.	Missouri
The hardboard used for subflooring and wall panelling was made from old newspapers.	New Jersey
The compost (fertilizer) for the outside yard was processed from garbage.	New York
Leftover fibres from carpet factories were recycled into new yard for carpets.	North Carolina
Twenty percent of the cement used to make concrete was produced by collecting from the polluted air fly ash, solid, airborne particles from burned fuel.	West Virginia

There were many other recycled materials used in the structure of this home. Over thirty organizations were involved in this project which showed that recycled products can be used in home construction. These homes are as durable as those constructed from the common building materials.

When Canada is able to recycle materials on a large scale, then we can truly say garbage can be turned into homes. The cost of the recycled home was similar to that of nearby homes. As recycled materials become more readily available, the cost will more than likely decrease.

Careers Related to Housing

In this part of the lesson, we will be examining a number of careers related to housing which may be of interest to you. However, before going on you should be aware of the following information:

Admission Requirements

A matriculation high school diploma with a good academic average is required for entrance to university programs. The minimum academic average required may differ each year and between universities, and the exact grade XII courses required for entry differ among programs. Therefore, you are advised to contact the universities for up-to-date admission requirements if you are interested in these programs.

Likewise, college admission requirements are always subject to change and differ among colleges. You should always confirm requirements for programs in which you are interested by writing or telephoning the registrar of the college or AVC.

You should also be aware that the universities and colleges may not demand full academic requirements of mature adult students, if these students meet other specified requirements. Adult status at universities is restricted to students over 21 years of age; adult status at college may vary from 18 to 25 years depending upon the program.

Fees

Fees for training programs change yearly. For the 1986-87 year, the yearly fee for university tuition and general fees, such as students' union, is in the range of \$1 000 to \$1 300.00. Yearly college tuition also varies according to the program and college. College tuition is generally lower than university tuition. In 1984, tuition charge for Alberta Vocational Center (A.V.C.) programs was \$4.80 per week of the program. Many A.V.C. students are sponsored by government agencies, and the tuition costs for these students are covered.

When financially planning one's educational program, it is important to be aware that **there are many other expenses to be considered besides tuition and general fees**. The expenses for a year of college or university can easily run to \$5 200 for a student living away from home (1986-87 figures). This cost does not include transportation.

Of course, a student living at home may not have room and board and transportation expenses to pay and, therefore, his or her educational costs may be significantly lower.

One advantage of attending college rather than university may be that it will allow a student to live at home and lower living costs.

Financial Aid

There is a good deal of financial aid available to students in the form of low interest loans, grants, bursaries, scholarships and subsidized training programs.

Ask your college or university for a listing of aid available.

Criteria for Choosing a Career

Following are some general points to consider in the choice of a career.

1. Select a career within your capacity.

You have certain physical and mental abilities. Match these against job requirements so that you can make the best use of your capabilities. For example, if you are interested in architectural work or landscaping you should determine whether artistic ability is required in the particular area and whether or not you can handle the artistic aspect.

2. Seek the type of work that you can enjoy.

Your work will be part of your daily routine; satisfaction or dissatisfaction with it will influence your other activities and leisure time. Young people may be attracted to jobs with high wages. This is fine if the work is also enjoyable. However, most persons find that money alone is not sufficient remuneration for work they dislike.

You need to have an interest in your job. Sometimes a special interest helps to make you qualified for a position. If you enjoy art and have a special talent for it, you may qualify for a job that requires artistic abilities.

Many housing careers require artistic abilities. Interior designers and decorators, architects, landscapers, furniture designers and textile designers all work with art.

3. Secure a job that pays adequately.

In considering wages it is also worthwhile to consider fringe benefits such as pensions, medical insurance coverage, sick leave, holidays and overtime pay. You should also know whether the work is likely to be continuous throughout the year, or whether it is seasonal. This can be especially important if you are involved with monthly payments or instalment buying, as the bills will continue to arrive whether or not you have an adequate income.

When checking the pay scale you should keep the following in mind:

- (a) How much will I get paid?
- (b) Does everyone doing the job I am doing get the same pay?
- (c) On what is the pay increase based?

When considering the fringe benefits ask yourself:

- a. Are there insurance benefits?
- b. How much sick leave is granted during the year? Does it accumulate?
- c. Is there personal or emergency leave?
- d. Are training programs provided?

4. Choose a field that is not already overcrowded.

The most recently employed persons in a job are the ones most likely to be first laid off. Enter a career where the demand for services or products is steady or increasing.

5. Look for a job with prospects of advancement. Is there an opportunity for advancement? Consider the following:

- a. How soon and how often can you expect to move up the ladder?
- b. Are there special expectations of you before you advance?

6. Study the conditions of work.

Inquire about working hours and possible health and accident hazards. Ask yourself these questions:

- a. Where will I be working?
- b. Is the place safe and clean?
- c. Will my working time be shiftwork and what are my working hours?

7. Be adaptive in your vocational choice.

There are probably quite a number different things you can do even though you may have more ability with certain types of work than others. If you find that you cannot succeed in one kind of work, you may be able to do so in a related area. For example, a student who lacks the qualifications to enter university to become an architect may take a two-year program at a technical school to become a draftsman.

A Wrong Choice

Some persons may find themselves in the wrong job. Why? Following are some possible reasons. Even though learning from your own experience is most effective, you can benefit from the experiences of others. Consider these causes:

1. Lack of knowledge

Some persons do not realize there are many possible opportunities within an area. They may take one of the first jobs offered to them without studying other types of employment. For example, careers related to art can include:

illustrator of books	painter and creative artist
landscape architect	floral designer
interior designer	display man in stores
architect	advertising and sign painter
commercial painter	cake decorator
art teacher	photographer
cartoonist	jeweller

2. Parental persuasion

You have likely read or heard of parents who decided a child's vocation for him when he was just beginning school! With the best of intentions parents have sometimes wanted their children to strive for goals they themselves did not reach. The result may be that a young person is forced into a profession or vocation in which he is not interested or for which he lacks aptitude. However, if parents consider the interests and abilities of their children they may be able to give useful advice as a result of their broader experience.

3. Influence of friends

You are an authority on the influence of your friends — think about it! What effect will they have on your choice of a career?

4. Appearances and Impressions

Some persons are impressed by the authority or uniform that is part of a position, and fail to realize all the responsibilities or duties that are involved. You can observe this most easily among children in their play or their choice of an adult role. For example, some children may decide to be teachers because they wish to be like some teacher whom they admire. And can you not recall adults saying that teaching must be a position with few demands — after all, the hours are from 9 to 4, with a long summer vacation! Some boys may choose the same job as their fathers. To find out about the real nature of the work involved in a career, talk to some respected person in that job or profession. Then decide. Many persons not really understanding a career can see only its advantages rather than both advantages and disadvantages.

Investigating a Career

The questions and comments which follow will assist you in studying a career in depth. Occupational monographs include information to give you a perspective of this career in society today.

1. History of the occupation.**2. Importance of the occupation and its relation to society.**

Is the work of a services nature in which I will work with the public? Is the job one which will likely be outdated with increased automation and technology?

3. Workers in the occupation

What are the numbers of workers in various age groups? Do current trends indicate fewer workers in this area, or more during the next decade? In which cities or areas is there a demand or an excess of workers in this occupation? What kind of people shall I be working with? Shall I be able to respect their ideals and interests, and enjoy their companionship?

4. Duties

What is the exact nature of the work to be done in this job? Does it call for a certain amount of exercise or is it a sedentary occupation? What tools, machines, or materials are used in the performance of the work?

Is the kind of work determined or defined by a professional association, a union, or within the law (as for example, licensing legislation for undertakers)?

Is the work interesting or monotonous? Routine or varied?

5. Qualifications

Have I the natural capacity to do this type of work? What special skills are essential to performance on the job? Must I supply any special tools or equipment in this employment?

6. Preparation and entrance to the occupation.

Consider the basic educational requirements for the job and specific courses that may be of special value. What special training or education is required to equip me for the job? Is there an apprenticeship program to follow? How long will such training take? Must I attend a training center in preparation for the job or will I "learn as I earn"? Have I the finances to pay for any necessary training or education, or is financial assistance possible?

Must I write an entrance examination to enter this occupation or employment? Can I receive help from employment or placement agencies?

7. Advancement

Are there opportunities for promotion? If so, in which duties or responsibilities must I excel?

8. Earnings

What is the starting wage? Are there increments or pay increases with increased experience? What are the average and maximum salaries? Are there employer contributions to pensions and insurance plans? Must I pay union or professional dues? Will I be contributing to unemployment insurance?

9. Conditions of work

What are the hours of work? Must I work shifts or irregular hours? What is the vacation time allowed? Are there sickness allowances? Is overtime likely, and if so, what remuneration is provided? Are there any health or accident hazards with the work? Is compensation available for diseases that may result from this occupation (for example, respiratory diseases that could be caused by dust or smoke)?

10. Typical places of employment

For example, electricians may find employment in electrical repair shops, doing wiring with construction companies, with a gas and electric company, in a power house, in the maintenance department of factories using electrical machinery, etc.

11. Organizations

Are workers in jobs of this kind members of unions? Must I belong to a professional association?

Career Opportunities Related to Housing**Architects****Duties**

An architect designs buildings, develops plans, specifications and detailed drawings, arranges contracts and exercises general supervision over construction. He consults with clients to determine the type, style and size of buildings. He also provides information regarding design, materials, costs and estimated building time.

Preparation and Training .

Educational Requirements—In Alberta, the requirements are: high school diploma or equivalent, a three to four year university degree, plus completion of a post-graduate program of three years leading to a Master's Degree in Architecture available at the University of Calgary. Programs at an undergraduate level are available at the University of Calgary, University of Alberta and University of Lethbridge.

On-The-Job Training—A practical training period of two years duration under the supervision of a registered architect is required.

Landscape Architect**Duties**

A landscape architect plans and designs aesthetic layouts for optimum usage of land areas like parks, airports, industrial, commercial and residential subdivisions. He compiles and analyzes site data, directing particular attention to geographic location, ecology of the area, vegetation, soil rock features, drainage and location of structure. He prepares site plans, working drawings, specifications and cost estimates for land development.

Preparation and Training

Educational Requirements—In Alberta, the typical requirements are: a high school diploma or equivalent, and a three to four year university degree. Completion of a three year post-graduate program in environmental design (architecture) would be an advantage. A program at the Master's Degree level is available at the University of Calgary. Undergraduate degree programs in landscape architecture are not available in Alberta but are available at the University of Toronto.

On-The-Job Training—Another method of training is a practical training period of at least five years duration under the supervision of a landscape architect, followed by a qualifying examination set by the Alberta Association of Landscape Architect, Calgary.

Architectural Drafters

Duties

An architectural drafter prepares drawings showing internal, external or other architectural features of office blocks, residential structures, industrial and commercial buildings, makes calculations to determine the type and quality of materials required. He prepares working drawings showing plans, evaluations, sections and typical details for use on the construction site, using a variety of drafting instruments. He may estimate quantities of materials required for the project and compute the costs..

Preparation and Training

Educational Requirements—In Alberta, a high school diploma or equivalent, preferably with emphasis on mathematics, physics and drafting is required. Completion of a program, one to two year(s) at an institute of technology or at a community college with emphasis on architectural drafting is recommended. A typical program in architectural technology is available at Southern Alberta Institute of Technology (SAIT), Calgary; Northern Alberta Institute of Technology (NAIT), Edmonton; Lethbridge Community College and Lakeland College, Vermilion. Suitable drafting training may also be obtained through full or partial completion of a program in basic drafting or in a drafting specialty such as architecture and engineering. The Alberta Correspondence School offers a Drafting 10 course.

On-The-Job Training—Those having little or no drafting training, require up to four years of on-the-job training and related experience provided by an employer. The training is under the supervision of an experienced worker, preferably supplemented by courses in drafting. Those with formal drafting training require at least one year of on-the-job training to become proficient in the architectural drafting field. Those with specific training in architectural drafting require at least six months of experience to become proficient.

Surveyor

Duties

A surveyor surveys the earth's surface and oversees engineering survey parties engaged in determining exact location and measurement of points, elevations, lines, areas and contours of the earth's surface. This data is used for construction, map making and land valuation. He prepares drawings such as plot plans, contour drawings and cross sections for land usage planning. He directs activities of the survey crew in surveying duties.

Preparation and Training

Educational Requirements—In this province, the typical requirements are: a high school diploma or equivalent, plus two years in an Institute of Technology with emphasis on surveying technology or a four year university degree with a major in survey engineering. A typical program at the technical level is available at NAIT. A four-year program in geography (Survey Science) is available at the University of Alberta.

On-The-Job Training—A practical training period of one to two year(s) duration under the supervision of a registered land surveyor is required.

Bricklayer and Stonemason

Duties

Bricklayers and stonemasons, the title used in the province of Alberta, lay brick, slabs and blocks of stone, structural tile and similar materials to construct and repair structures such as walls, arches, fireplaces, chimneys and piers. They also examine specifications to determine materials, dimensions and layout.

Preparation and Training

Apprenticeship Programs—Training is by an apprenticeship program or similar form of on-the-job training provided by an employer. Apprenticeship programs conducted in accordance with provincial standards require: minimum age of sixteen years, minimum education grade nine or equivalent, four periods of 1600 hours (about four years) including twelve weeks of fulltime tradeschool attendance or equivalent during the first year and six weeks in the second and third year of apprenticeship.

Certification—Certification is not compulsory. A certificate of qualification is issued by the Director, Apprenticeship and Trade Certification Branch, to applicants who hold a recognized certificate of apprenticeship or provide evidence of at least four years of satisfactory experience and pass qualifying examinations. Apprentices graduating from a recognized provincial or territorial program may obtain an interprovincial seal by passing the required examinations. This permits them to work in other provinces or territories without further examination.

Carpenter and Related Occupations

Duties

A carpenter builds and repairs structures and fixtures of wood and other construction materials and studies plans and building codes to determine dimensions and materials required. He constructs forms for concrete footings and walls. Also, he erects framing, partitions and roofs. He lays floors, installs window frames and doors, and finishes trims and hardware. He builds stairs and makes and installs cabinets.

Preparation and Training

Apprenticeship Programs—Training is by an apprenticeship program or similar form of on-the-job training. Apprenticeship programs conducted in accordance with provincial standards require: minimum age sixteen years; grade nine education, four years of on-the-job training plus eight weeks of full-time attendance at a trade-school or equivalent during each year of apprenticeship.

Certification—Certification is not compulsory. A certificate of qualification is issued by the Director, Apprenticeship and Trade Certification Branch. Apprentices graduating from a recognized provincial or territorial program may obtain an interprovincial seal by passing the required examinations. This permits them to work in other provinces or territories without further examination.

Electrician

Duties

An electrician lays out, installs and maintains electrical wiring and related equipment in houses, industrial and commercial establishments and other buildings. He examines drawings and specifications to determine layout of electrical systems. He tests circuits and makes electrical measurements to ensure safety and correct operation of equipment. He also adjusts and repairs or replaces defective items.

Preparation and Training

Apprenticeship Programs—The only method of training is through the apprenticeship programs conducted in accordance with provincial standards. Requirements are: minimum age of sixteen years, minimum education grade ten, four periods of 1800 hours (approximately four years) including eight weeks of full-time trade-school attendance during the first, second and third year and twelve weeks in the fourth year of apprenticeship. Prospective apprentices must find employers willing to provide a provincially recognized program.

Certification—Certification is compulsory. A certificate of proficiency is issued by the Director, Apprenticeship and Trade Certification Branch. Apprentices graduating from a recognized provincial or territorial program may obtain an interprovincial seal by passing the required examinations.

Painter and Decorator

Duties

A painter and decorator applies paints, wallpapers, and various finishes to interiors and exteriors of buildings. He removes existing finishes by scraping, wire-brushing and sanding or with water, steam or chemical preparations. He prepares surfaces by filling cracks and smoothing the area with a sander. He applies paint finishes using brushes, rollers or spray equipment. He mixes paint to match sample colors and measures and cuts wallpaper, fabric or plastics and applies these to walls or ceilings. He may estimate costs, provide quotations and advice on suitability of different materials.

Preparation and Training

Apprenticeship Programs—Training is by an apprenticeship program or similar form of on-the-job training. Apprenticeship programs are conducted in accordance with what provincial standards require: minimum age of sixteen, minimum education grade nine, three periods of 1600 hours (approximately three years), including eight weeks of full-time trade-school attendance or equivalent during each year of apprenticeship.

Certification—Certification is not compulsory. A certificate of qualification is issued by the Director, Apprenticeship and Trade Certification Branch, to applicants who hold a recognized certificate of apprenticeship or provide evidence of satisfactory experience and pass qualifying examination(s). Apprentices graduating from a recognized provincial or territorial program may obtain an interprovincial seal.

Roofer

Duties

A roofer applies weatherproofing materials such as shingles, hot tar, asphalt and gravel to roofs and other building surfaces. He estimates materials required according to plans and specifications. He also measures and covers surfaces with roofing paper, vapour barrier and insulating materials. He fastens shingles with staples or nails and spreads hot tar and gravel on roofs (built-in roofing).

Preparation and Training

Apprenticeship Programs—Training to be a roofer is by way of an apprenticeship program or similar form of on-the-job training. Apprenticeship programs are conducted in accordance with the required provincial standards: minimum age of sixteen, minimum education grade nine, three periods of 1600 hours (approximately 3 years), including six weeks of full-time trade school attendance during each year of apprenticeship.

Certification—Certification is not compulsory. A certificate of qualification is issued by the Director, Apprenticeship and Trade Certification Branch, to applicants who hold a recognized certificate by apprenticeship or provide evidence of satisfactory experience and pass qualifying examinations.

Plumber

Duties

Plumbers lay out, fit, assemble and repair piping and fixtures used for water distribution and waste disposal in homes, schools and other buildings according to plumbing codes. They study specifications to determine layout for plumbing systems and locate and cut holes for connections in walls and floors. They measure, cut, thread and bend pipe to specifications, assemble and install valves, fittings and pipes made of metal, plastic, glass or vitrified clay and set fixtures.

Preparation and Training

Apprenticeship Programs—The only method of training to become a plumber is through apprenticeship programs conducted in accordance with provincial standards. Requirements are: minimum age of sixteen, passage of an entrance examination, duration four periods of 1800 hours (about four years), including eight weeks of full-time trade-school attendance or equivalent during each year of apprenticeship. Prospective apprentices must find employers willing to provide a provincially recognized program and must pass an entrance examination.

Certification—Certification is compulsory. A certificate of proficiency is issued by the Director, Apprenticeship and Trade Certification Branch. Apprentices graduating from a recognized provincial or territorial program may obtain an interprovincial seal.

Plasterer

Duties

Plasterers apply coats of plaster or similar materials to walls and ceilings of buildings. They check alignment of corners, walls and ceilings. They apply base coat and finish surfaces with trowels, brushes and water to create smooth or decorative textures. They may seal and tape joints used in drywall (non-plaster) construction. They may also specialize in applying stucco to exterior building surfaces, or in casting and installing decorative plaster mouldings.

Preparation and Training

Training is through on-the-job program provided by an employer. Requirements are set by individual employers.

Certification—Certification is not compulsory. However, a certificate or qualification is issued by the Director, Apprenticeship and Trade Certification Branch, to applicants who hold a recognized certificate of apprenticeship or provide evidence of satisfactory experience and pass qualifying examination(s).

Interior Designer and Decorator

Duties

An interior designer and decorator plans and designs aesthetic interiors for homes, industrial, commercial and institutional establishments. He analyzes functional requirements, desired mood and purpose of furnished interiors, based on client's needs and preferences. He plans harmonious color schemes and sketches plans of areas showing arrangement of furniture and accessories. He estimates cost and amount of materials required and presents plans to clients for approval. He can select or recommend purchases of decorative and functional materials and accessories or create original design for furnishings to conform with decorative schemes.

Preparation and Training

Educational Requirements—In this province, typical requirements are: a high school diploma or equivalent, two years at a community college in interior design. Programs are available at Mount Royal College, Lincoln Park Campus, Calgary; Lakeland College, Vermilion and Northern Alberta Institute of Technology, Edmonton. A four year degree program in interior design is available at the University of Manitoba, Winnipeg.

Real Estate Agent

Duties

A real estate agent rents and sells property for clients on a commission basis. The agent brings together prospective buyers and available property. He keeps abreast of current property listings and examines properties for sale so he can be familiar with what he has to offer.

Training

An applicant for entry into the real estate field must be sponsored by a real estate firm and qualify by examination for a license in conformity with provincial licensing laws. A period of training on-the-job through working in a real estate office or working with an experienced member of a real estate firm is useful preparation. Then further formal training is usually available to personnel employed with firms which are members of the local real estate board. A correspondence course is available through the Division of University Extension, University of Toronto. The course takes three years with written examinations leading to designation in the Canadian Institute of Realtors.

In Conclusion

As you can see, there are many careers related to housing from which one can choose. Before considering a career, you should be able to see yourself clearly which means understanding the ways in which you work best, the kinds of people you enjoy, the talents you possess or can develop and the future you want to build. Do not be led by what somebody else thinks you should be or by what you think is the only thing you can do.

Hopefully, in reading this lesson you have thought of a few skills and interests you have which hold potential earning capacity. You need to assess your own values, abilities and interests and to think of how you can reach the career goals you have set. If you are keenly interested in any one of the careers related to housing, you owe it to yourself to explore a specific career in housing, or a career in any other field, remember that there is no substitute for hard work and patience. Also, it is best to get as much education as you can.

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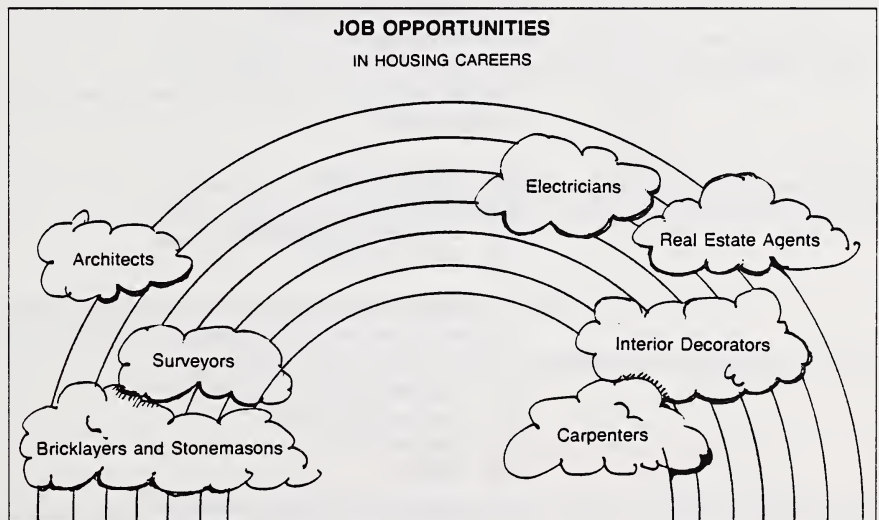
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Self-Study Exercises**EXERCISE 1: Multiple Choice**

Select the best possible answer and place the appropriate letter in the space to the left of each question.

- _____ 1. Some key points to consider about a potential career are (Pages 8-10)
- (a) interests.
 - (b) advancement prospects.
 - (c) conditions of work.
 - (d) all of the above.
- _____ 2. This man designed a city using the concept of cluster housing which he felt would accommodate all people with their housing needs. (Pages 2-3)
- (a) Jacques-Yves Cousteau
 - (b) Fraunhoffer
 - (c) Dr. Gerard O'Neill
 - (d) Lloyd Wright
- _____ 3. This person who would have a good understanding of the fundamentals of space planning creates interiors that suit the client's needs and desires. (Page 15)
- (a) interior designer
 - (b) architect
 - (c) landscape architect
 - (d) carpenter
- _____ 4. Before deciding to take a job one should know about which of the following? (Pages 8-10)
- (a) dues and fees
 - (b) pay scale
 - (c) physical surroundings
 - (d) all of the above
- _____ 5. This person keeps abreast of current property listings and examines properties for sale so he can be familiar with what he has to offer. (Page 16)
- (a) architect
 - (b) real estate agent
 - (c) draftsman
 - (d) roofer
- _____ 6. Financial aid available to students comes in the form of (Page 6)
- (a) low-interest loans.
 - (b) bursaries and scholarships.
 - (c) grants and subsidized training programs.
 - (d) all of the above.

EXERCISE 2: True and False

Carefully read each statement below and decide if it is true or false. If the statement is true, place a **T** on the blank to the left of the statement. If the statement is false, place an **F** on the blank to the left of the statement and on the line provided, change the *highlighted* portion of the statement to make it true.

- _____ 1. Clustering creates *low density housing and much wasted land*. (Pages 2–3)

- _____ 2. Fringe benefits are items like *pensions, medical insurance coverage, sick leave, holiday and overtime pay*. (Page 6)

- _____ 3. In Fraunhofer's Millennium city, all pollution is controlled and *all resources are used wisely including gases from recycled human wastes*. (Page 3)

- _____ 4. The *senior* employed persons in a job are the ones most likely to be first laid off. (Page 7)

- _____ 5. Some *people are very impressed by the authority or uniform that is part of a position*, but fail to realize all the duties and responsibilities. (Page 8)

- _____ 6. In choosing a career, one should match one's physical and mental abilities against job requirements *so that one can make the best use of one's capabilities*. (Page 6)

- _____ 7. Most people find that money alone is *sufficient remuneration for the work they dislike*. (Page 6)

- _____ 8. *A person's skills and interests* hold potential earning capacity for him. (Page 6)

EXERCISE 3: Matching

For each word in **List A**, find the phrase in **List B** that best describes that word. Write the number of the word in the space provided.

List A**List B**

- | | | |
|--------------------------|-------|---|
| 1. Dr. Gerard O'Neill | _____ | a. built an underground house in Scottsdale, Arizona. (Page 3) |
| 2. Lloyd Wright | _____ | b. believed that people will soon be living in self-contained space capsules. (Page 3) |
| 3. Jacques-Yves Cousteau | _____ | c. believed that a home should be "of the hill" so the hill and house can live together. (Page 3) |
| 4. Paolo Soleri | _____ | d. can visualize cities on the ocean floor resembling the space house capsules of outer space. (Page 4) |

Complete <i>Exercises 7</i> and <i>8</i> in your Assignment Booklet for Module E: A Study of Housing, now.
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